The National
Future Farmer
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August—September, 196

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Corn growers have discovered a new way to increase their profits from corn: *Plant 100 per cent of their corn acres to the new extra-high-yielding Funk's G-Hybrids.*

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THE HOT LINE HYBRIDS

The National
Future Farmer

VOLUME 17 NUMBER 6 AUGUST-SEPTEMBER, 1969

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In partnership with his brother, William Thomason of Stillwater, Oklahoma, uses a complete land management program to save soil and make money. He says the key to his program is alfalfa. He uses modern cultural practices and pasture management which pays off at harvest time. He also runs a good size cattle herd and rents additional land. Read how he does it, along with the two other "Land Strategy" features.

Engine Oil Selection 29

With the stress and strain of long hours of operation by modern tractors, high performance of quality oils is a necessity. Picking the right oil for your tractor will mean more trouble-free hours of operation. And, knowing what oil to use can save on repairs, too. This feature discusses everything from viscosity to special dopes and includes full descriptions of oil additives.

Ways and Means 38

When FFA chapters plan their program for the year, there's always one question left unanswered — ways and means. There are lots of ways — like a rodeo — in which chapters can raise the money they need to carry on outstanding programs. There are also many more fund raising ideas in the article. They have been put to the test and have added "dollars" to chapter treasuries.

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Our Cover

FFA members of the Elgin Chapter at Marion, Ohio, show a calf to curious kids at the Ohio State Junior Fair. Edward Atkins, on the left, and Tom Chambers, on the right, happened to be on hand helping with the FFA farm nursery. Each afternoon at a special showing, the young animals are brought out so kiddies can pet them. Many local chapters and state associations have found this type activity to be a fine public relations effort. And certainly the children have fun seeing the animals up close — many for the first time.

Photo by Ralph Woodin

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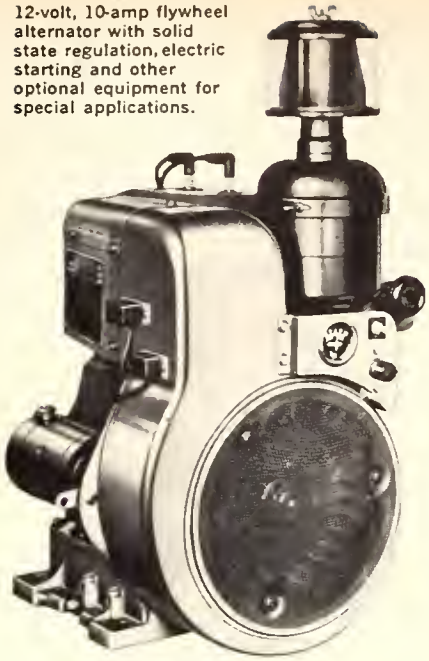

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A Word with the Editor

ANOTHER top honor has come to Joe Boyd Spencer, 1968 Star Farmer of America. He was one of eleven national winners named to the Hall of Fame for America's Young Captains of Achievement by the American Academy of Achievement. Each winner received the Academy's new Golden Eagle Award for the Promise of Greatness at the 1969 "Banquet of the Golden Plate," held in Dallas, Texas, on June 28, 1969.

The American Academy of Achievement is a non-profit organization dedicated to the inspiration of youth — to raise their sights high, to excel in their endeavors — through the dramatic annual gathering of, and salute to, men and women of extraordinary performance in the great walks of life. Among those honored this year were Dr. Charles H. Towne, inventor of the laser; Mickey Mantle, New York Yankee baseball great; Col. Frank Borman, USAF and Apollo 8 spacecraft commander; Lt. Col. William Anders, USAF and Apollo 8 space pioneer; William W. Keeler, Chairman of Board of Phillips Petroleum; Alan King, humorist; Ann Landers, human relations columnist; and 42 other men and women of exceptional accomplishment in the sciences, professions, industry, arts, and public service.

There were also eight FFA State Officers and State Star Farmers among the 150 honor high school students recognized. They included Neil Brood, Idaho; Dan Dooley, California; Tim Kelly, Florida; Steve Linvill, Indiana; Rick Mabery, Arizona; Bill Sarpalius, Texas; Pete Stauffeneker, Minnesota; and Earl Weaver, Pennsylvania.

Wright Joins Ad Staff

Richard Wright

Richard Wright has been named Regional Advertising Manager of The National FUTURE FARMER. Operating from the Midwest sales office in Chicago, Dick will be responsible for accounts in Omaha, Kansas City, St. Louis and Chicago.

Wright was born and raised in Watertown, South Dakota and attended Northern South Dakota State College. In college, he was active in sports and a member of Blue Key (Honorary) Fraternity. He also served two years in the in the U.S. Army. Dick comes to us from Northrup King & Company where he served as Assistant District Sales Manager.

Leadership Conferences

Early indications point to an overwhelming success for the Leadership and Citizenship Conferences for chapter presidents held in Washington, D. C. in late June and July. While the evaluation reports filled out by the participants have not been fully summarized at this point, comments from many of those who were here and a scanning of the reports indicate a strong desire among these FFA officers to see this type of program continued. In addition to the approximately 100 chapter presidents who attended each of the three week-long conferences, there were from 15 to 20 local FFA advisors who attended each conference. As one chapter president described it, "... the most educational, informative, and interesting week of my life."

Wilson Carnes
Editor

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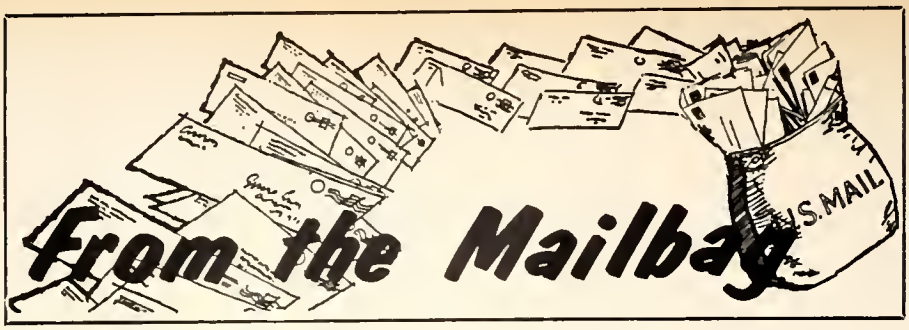


Wimmis, Switzerland

I arrived here on Wednesday, June 18, at about four in the afternoon. It has rained a lot.

The family I am staying with is very nice. I am on a dairy farm of 35 acres. This is one of the largest farms around here. There are eight cows and we milk them by hand.

They do not have a car, and if you want to go anywhere you either walk or ride a bicycle.

I am at the edge of the Alps, and the country is very beautiful.

Chess Fryer
FFA Work Exchange Student
Pennsylvania

Arcadia, Florida

The articles "Summertime Bass" and "Breeding Disease Resistant Livestock" were especially interesting to me.

This is my first year of vo-ag and it was enjoyable. I plan to take it again next year.

Clyde Pool

Sylvania, Alabama

We wish to thank you for the conducted tour of the magazine facilities at the National FFA Center.

Gilbert and Lavada Butler
Vocational Agriculture Instructor

Hulett, Wyoming

How do I go about keeping my subscription to the Future Farmer magazine? I am 20 years old and I am in my last year in the FFA. I am also the oldest member in the Devil's Tower Chapter.

Dennis Perkinson

You may continue your subscription after your FFA membership by sending for a single subscription directly. It is 75¢ per year or three years for $2.00.—Ed.

Oklahoma City, Oklahoma

Recently I had the opportunity to read one of your magazines while visiting in the hospital. I was impressed with it. In fact, so much that I'd like to subscribe to it. So, would you please send me the magazine and let me know the price. Also I'd like to order one of the calendars for 1970.

I appreciate your excellent magazine. I'm sorry that my son will not have the opportunity of growing up on the farm as I did.

Rev. Harry Boydstun
Sunnyside Baptist Church

Plymouth, Indiana

I appreciate the fact that you gave some of your time to participate in the first National FFA Leadership and Citizenship Conference for Chapter Presidents.

On behalf of the Plymouth FFA Chapter in Indiana, I would like to say thanks for the fine job you all are doing with the *The National FUTURE FARMER.*

I always look forward to receiving the magazine.

Al Neidlinger

Amite, Louisiana

I am president of the Amite Chapter. Please send information on the FFA Calendar program.

James Walker

A free calendar kit is available upon request to all local chapters. It includes facts on how to participate, sample calendars and order forms.—Ed.

Chicago, Illinois

Just noted the hybrid wheat article on pages 20 and 21 of your April-May issue. We, as well as DeKalb, appreciate the mention of DeKalb and would appreciate a few tearsheets of this story for our publicity file.

Wendell Unfer
Aeyer-Oswald, Inc. Advertising

Floyd, Virginia

I read in *The National FUTURE FARMER* magazine about beeswax. I am a bee raiser and want to buy beeswax from you. Please send me information at once.

Mont Thompson

We do not have beeswax for sale here at the magazine. You are referring to the article in our April-May issue about Jo Wilson of Ford Valley, Georgia.—Ed.

Douglas, Arizona

Please send us ten copies of the June-July issue of the Future Farmer magazine. We want to send copies to our families.

By the way, these members on the cover aren't fooling around. They help each other and neighbors when needed. Bill helped brand one night til 2 a.m. when the cattle were crossing the Mexican border (only seven blocks from his home). He was up at 7 a.m. for school. All for $1.00 per hour.

But, he would have been there for free!

Mrs. George Martin

Bill Martin appeared in the cover picture on the June-July issue.—Ed.

Waynesville, N. C.

As a former recipient of the American Farmer Degree, I would like you to begin a new subscription for me.

I had the honor of receiving the degree in 1944. I was one of eight during the ten years my advisor, Mr. J. C. Brown, was at Waynesville. For as long as I live, I will cherish the events and challenges leading up to this coveted award.

Carmel Hollingsworth

Monrow, Wisconsin

I'm sure the staff has put in lots of time and work to make the first National Leadership and Citizenship Conference for local chapter presidents a big success.

Your talks and the added information about the magazine and the National FFA Center was well appreciated. The conference was most enjoyable for me.

Keith Haldiman

Springville, Utah

Although it has been over 20 years since I was in the FFA, I still like to keep abreast. I enjoy reading my son's copy of the FFA magazine.

Since this magazine is a source of information, why put out erroneous information in "Sportrait" (June-July 1969, page 26)? Denny McLain was not the first pitcher in Major league history to simultaneously win the most Valuable Player and Cy Young awards. (Try Don Newcombe in 1956 or Koufax in 1963.) Maybe he meant the third pitcher in major league history, or the first pitcher in American League history.

Ron Warner

You are so right in that Denny was the third major league pitcher to win the Most Valuable Player and Cy Young awards simultaneously. We caught the error, but after the magazine had been printed.—Ed.

Redwood Falls, Minnesota

The Redwood Falls FFA Chapter is sponsoring a "Weed for Courage" anti-smoking campaign. The members may give the price of a package of cigarettes to the crippled and handicapped children at Camp Courage.

When a member contributes his money, he receives a cocklebur to wear on his jacket or to put in his pocket. This is to carry out the objectives of the campaign: (1) To remind the members of the pain of cancer caused by cigarette smoking, and (2) to understand the economic loss.

Steve Zimmer

Sallis, Mississippi

I am writing to request some information on carpentry. I want to be a carpenter and need all the help I can get.

Robert Smith

We do not have any printed information on carpentry which we could send you. You might ask your vocational agriculture instructor.—Ed.

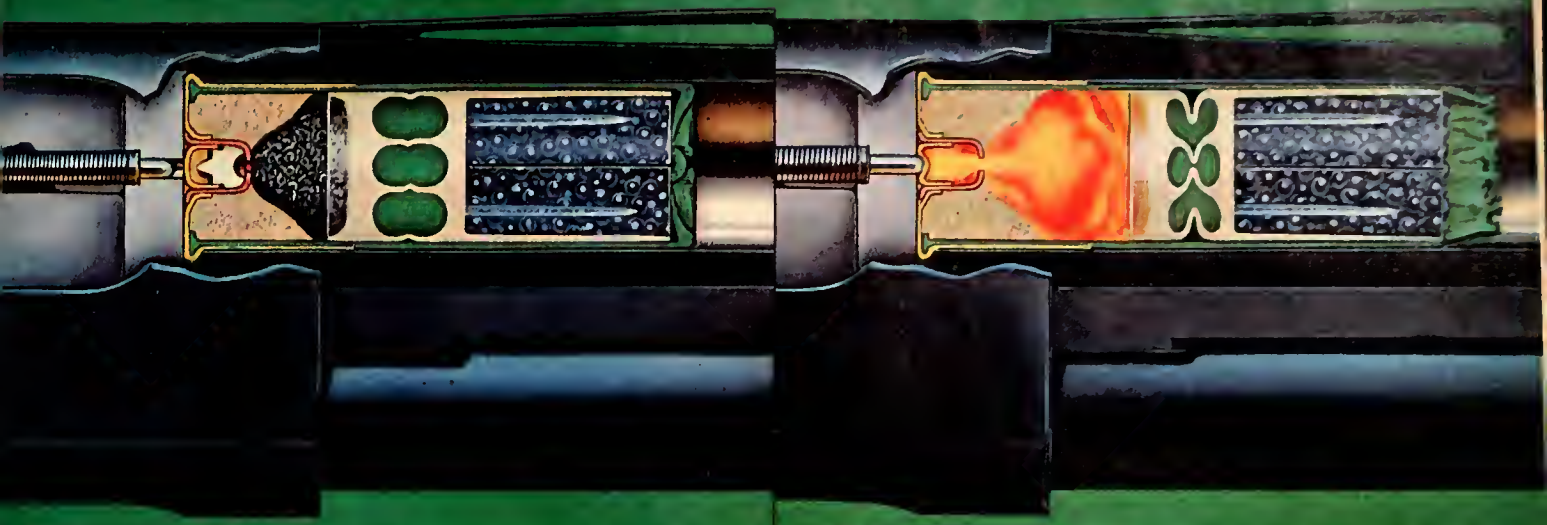
Newman, California

The Newman FFA Chapter has dedicated the Charles Arosteguy Orchard in memory of a former agricultural teacher at Orestimba High School. Through Mr. Arosteguy's efforts, the chapter has a two-acre orchard behind the agricultural building. The orchard is used for educational purposes for the members.

Mr. Arosteguy was killed in a car accident and the chapter has named the orchard in his memory.

Terry Roberts

5 milliseconds in the life of a "Power Piston" wad.



1 This is what the "Power Piston" one-piece wad (loaded in a Remington Express plastic shell) looks like from the time it leaves the factory until you pull the trigger.

2 Right after firing. The built-in shock absorber in the "Power Piston" compresses and absorbs the initial impact of the explosion, so the shot won't be crunched together.

3 Halfway down the gun barrel. The back end of the Remington "Power Piston" opens up to seal the barrel and keep the expanding gas from leaking past and losing power.

4 At the muzzle. Though the shot column is moving at top speed, the sides of the Remington "Power Piston" have kept it from touching the barrel and flattening the pellets.

5 A few feet past the muzzle. The "Power Piston" now peels back and drops away, but the shot column is on its way at full power, with no flattened pellets to spoil the pattern.

For some time we've been telling you that Remington and Peters shells with "Power Piston" wads shoot harder, keep your barrel clean longer and put up to 10% more shot in the pattern. But let's face it—you were taking our word for something you couldn't see. And while you may have noticed an improvement in your shooting, it was just as easy to give the credit to your new shotgun or just plain luck.

That's why this little demonstration. We feel that if we can show you what a "Power Piston" does you'll have more confidence in our shells. Also we can clear up a common misunderstanding. The "Power Piston" does not make the pattern smaller. It just puts more pellets into it by eliminating "flyers"—flattened shot that goes wild. No matter what gauge you shoot—12, 16, 20 or 28. And that's a fact.

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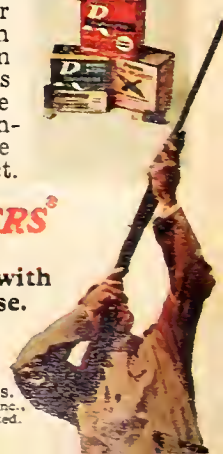

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Looking Ahead

Livestock

CO_2 LURES PESTS—Deer flies, horse flies, and related livestock pests are attracted by carbon dioxide. In tests conducted by Agricultural Research Service (ARS) entomologist R. L. Roberts in Mississippi, over 1,200 flies were caught in a trap baited with carbon dioxide while only 800 were caught in an unbaited trap. Other tests across the country show similar results and indicate the potential value for this gas in traps for control around livestock buildings.

"COWBELL FEEDING"—At the University of Illinois a new "cowbell," an electronic transponder worn around the cow's neck, is interrogated by a transmitter-receiver in the feed stall and automatically feeds the cow. The "cowbell" can be programmed with a screwdriver to a specific amount of feed based on milk production and feeding intervals. The transponder utilizes an electro-magnetic field from the interrogator, thus, no energy sources are carried by the cow. Each cow can enter any stall and receive her programmed amount of feed, regardless of frequency.

X-RAY JUDGING—A new "space age" judging technique, an X-ray procedure, will be used at the 1969 New York State Fair in the sheep, swine, and goat divisions. The X-ray will reveal the size of loin eye of each on-the-hoof animal for the first time in the quality meats contest. This process will help judges to determine the meatiness of each animal and could be a big boost to showing decisions.

SCREWWORM THREAT—Veterinarians with the USDA suspect another outbreak of screwworms in the fall, especially from September through November. The outbreak, however, should not reach the massiveness of the 1968 infestations of nearly 10,000 cases. Farmers are encouraged to treat every wound carefully as cool and moist weather again favors the reproduction of this livestock pest.

Crops

SEED SEPARATION—Iron powder, water, and surface characteristics of seeds permit the separation of crop and weed seeds magnetically, says N. R. Brandenburg, Oregon agricultural engineer. Since many crop seeds are waxy and smooth and weed seeds have rough or sticky surfaces, the iron substance sticks to the weed seeds. The seed is passed over a magnetic drum, thereby removing the weed seeds, dirt clods, and other trash. Magnetic separations can be used on alfalfa, clover, trefoil, and lespedeza.

Management

INCORPORATED FARMS—In 47 states surveyed by the USDA—California, Hawaii, and Alaska excluded—some 11,500 corporations were identified as farm business or producers of farm commodities. According to W. L. Gibson, agricultural economist at Virginia Tech, the corporations ranged from one-man to large businesses with interests other than farming. However, 68 percent were farm families that have reached a size where incorporation is desireable. In the survey nearly two-fifths of the corporations had sales less than $40,000, a third had sales of $100,000 or more, and less than 1,000 sold over $500,000.

SHIPMENT RULES—The U.S. Department of Agriculture's rules affecting the shipment of swine vaccines and hogs became effective on July 1, 1969. All slaughter hogs vaccinated after January 1, 1970, must be shipped as "exposed swine", and all hogs which contact them will also be considered "exposed" and will be subjected to interstate restrictions. Rules also prohibit interstate shipment of modified live cholera virus and shipments of killed virus vaccines into all but seven states. Shipments of vaccines and cholera serums to other countries are not affected.

Land

SOIL ORIGIN—Many soils from different parts of the world contain deposits of "aerosolic dust," particles finer than wind-deposited soil, that has been carried in the upper atmosphere from desert areas and washed down in the rain over the ages. A test developed by M. L. Jackson and J. K. Syers, soil scientists at the University of Wisconsin, identifies "aerosolic dust" by mass spectrometric analysis of the oxygen in the dust. These tests show that trade winds carried dust from the Sahara Desert of Africa to the North American continent. Also, Asian soils are believed to have been carried by westerly winds to the Hawaiian Islands.

GRADED FURROWS—With proper land smoothing, graded furrow systems can eliminate the need for some terraces and give farmers a more unobstructed field for multiple-row machinery. ARS in Texas constructed furrows, 40 inches apart, with a lister and built diversion channels at the top, bottom, and on the borders of the fields. These furrows—mini terraces—have successfully controlled erosion on slopes up to three percent. Slopes of ten percent are being studied in Mississippi ARS stations.

Buildings

CIRCULAR BARNS—Promising results of accomodating any number of cows are being obtained by combining three systems—liquid manure handling with slotted floors, self-feeding of silage, and free-choice stalls—within circular dairy barns. Barns are designed for a low space requirement per cow, low labor demand, and standard and modular construction. According to agricultural engineers at Rutgers University, animals determine their own living pattern in these circular structures. The locating of the units is also flexible as they need only be located in reference to holding and milking parlor areas.

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Azodrin controls *every* major insect threat to the crop—including pink bollworm and mites. Stands up to resistance. "Insures" against damage by migrating insects. And outwits weather and sucking insects or mites through ConStemic control that works from inside, as well as outside the cotton plant.

Azodrin, like every one of the fast-growing line of products from Shell Chemical Company's Agricultural Chemicals Division, was researched by farm scientists who are just as concerned with "better buy" as our sales people and our customers.

SHELL

Dr. Leon P. Minear, Director of the Division of Vocational and Technical Education, delivers his address at the 1968 FFA Convention.

An Educator's View of FFA

Editor's Note: Dr. Leon P. Minear is the Director of the Division of Vocational and Technical Education in the U.S. Office of Education in Washington, D.C. In this position he has an important leadership role in helping youth organizations maintain an effective relationship with the U.S. Office of Education. He gives some of his personal views of FFA and discusses these issues in this interview with the editor.

Q. ***DR. MINEAR, you participated in the National FFA Convention last year and had an opportunity to view the organization from the national level. Have you ever had the opportunity of working with the FFA at the local level?***

A. Yes, it was my pleasure to work with the FFA on several occasions while serving as a school administrator. I am quite proud of the fact that I was awarded the Honorary Chapter Farmer degree as a high school principal, and that I later received, as Oregon Superintendent of Public Instruction, the Honorary State Farmer degree. In fact, I once used the FFA creed as a foundation for an entire school activities program with excellent results.

Q. Much is being said today about vocational and technical education "bridging the gap between man and his work." Do you feel that the FFA accomplishes this?

A. The FFA provides a unique relationship—a combination of education and life. It allows the student to get away from a sterile academic program. It helps the student to identify with the world of work, and contributes to more effective teaching in the various occupational areas in agriculture. Students will find in the FFA ways and means of learning which the teacher could not very well, in any other way, make a part of the learning experience. The FFA incentive awards and contests program provides an excellent "facility" for the students to learn—to do—to earn and to be recognized for the development of proper attitudes and leadership abilities needed in today's competitive society.

Q. The FFA was organized to fill specific needs of youth through well planned activities. Do these needs still exist today? Are they being met by the FFA?

A. Many young people today have too much leisure time. They don't always know what to do with it. However, FFA members meet people, learn to conduct themselves well, and develop abilities to participate in meetings. Members become involved in community service projects. Their time is used, not wasted. One of the reasons the FFA program is so outstanding is that it takes a direct and positive approach to the student and gets him involved in activities that benefit him.

The FFA sets standards for itself. It provides youth with opportunities for personal development through experiences which should benefit the FFA, the school, the community, and the student. In working toward completing these tasks, his advisor will counsel him to properly assess individual and group actions.

I would say the FFA is filling the needs of youth today more effectively than it did in 1928, when the organization was founded. One of the greatest needs today is a counterpart to the FFA in the urban areas to provide group activities to the thousands of youth with great need for personal development. I understand the FFA is growing in urban and metropolitan areas and that three of the largest chapters are located in Boston, Philadelphia, and New York. I was informed that the 1969 State Star Farmer award in Ohio went to a student enrolled in horticulture training in Cleveland.

Incidentally, the adult leaders of the vocational education youth organizations meet monthly with me; and a plan has been developed to help students in urban areas, jointly and individually, through organized group activities related to the instructional program.

Q. As Director of Vocational and Technical Education, how do you propose giving leadership to the vocational youth groups for continued strengthening of the organizations on all levels of operation?

A. Of course, I will continue to assist vocational youth groups whenever I can. It is my responsibility to assist adult leaders as they work with national of-

(Continued on Next Page)

An Educator's View of FFA

ficers and state staff to coordinate activities of the organizations and keep them related to, and associated with, vocational and technical training. I see my role as one of helping these organizations evolve, relate to curriculum, and maintain an atmosphere of independence from political domination.

The federal role must be one of assistance, but one that does not dominate or control the organization. It must give leadership to the states and local chapters so that they can do a more effective job from the standpoint of the instructional program. These FFA chapters are unique in that they are grass roots. Leadership and guidance has to come from that level as well as from the state and national levels.

Q. The recent policy regarding the relationship of youth organizations to the U.S. Office of Education has caused great concern among persons engaged in vocational education. In light of this policy, what do you think is the obligation of the U.S. Office of Education to the FFA especially since there are questions regarding the policy and the FFA Charter (P.L. 740)?

A. The policy outlines certain physical adjustments regarding office space, supplies, and services. This new policy does not mean that we no longer recognize student organizations in vocational education as an important part of the instructional programs. It definitely does not affect the relationship that state agencies for vocational education have with such student organizations.

Those of us in the Division of Vocational and Technical Education of the U.S. Office of Education recognize the value of strong cooperative relationships with these organizations, especially as their activities relate to the instructional program. This office must continue working to find ways to cooperate and add positively to programs of vocational youth activities.

Q. The policy specifically requested the removal of FFA administrative operations from the U.S. offices. What do you recommend to prevent the same thing from happening in state departments of vocational and technical education where these persons have major responsibility for administering and coordinating the activities of the FFA in connection with other duties in supervision?

A. The new regulations for administering the Vocational Education Amendments of 1968, include a section on vocational youth organizations. This statement says, "The program of instruction may include activities of vocational education youth organizations, which are an integral part of the vocational instruction offered, and which are supervised by persons who are qualified as vocational education teachers or supervisors in the state."

We would encourage each state, as it develops state plans, to include the youth organizations in their plan, and to recognize ways in which the youth organizations can help in implementing the amendments. By the way, the work of the National FFA Advisor and National Executive Secretary—as it applies to the Office of Education's role in relation to the organization—has not been transferred from the Federal office, either physically or administratively.

Q. As you know there is a fear on the part of many people that this new policy will be misinterpreted as severing the relationship between the U.S. Office of Education and youth organizations like the FFA, and that this same thing will be carried out in many of the states. Does this new policy, in fact, sever this relationship between the U.S. Office of Education and the FFA?

A. By law, the FFA is an integral part of the agricultural education program. The National Advisor of FFA and the Executive Secretary remain a part of the U.S. Office of Education as provided by law. This cannot be changed unless the law is changed, and there is no plan to request such a change.

It is my plan to keep in touch with all vocational education youth organizations through monthly meetings of the national adult leaders. This affords a monthly exchange of ideas between the group leaders which should enable these groups to assist in implementing the Vocational Education Amendments of 1968.

Management-An Inroad

Because of the changes in capital input, farm size, technology, and other aspects of farming, opportunities to get started as farm managers will increase.

WITH more large farming units, the opportunity to enter farming through the process of income participation, manager-operator or some similar route, will increase in the years ahead. This will come about as those who control the larger units reach the income level or the age where they want to slow down or retire.

But by 1980, these new farm managers will need to apply the same business principles used in other quarter- to half-million dollar businesses. In the past two decades the rapid adoption of new technology almost always guaranteed success in farming. In the future, however, new technology will be crucial but will not insure success to the extent it has in the past.

Agriculture Economist R. N. Weigle of the University of Wisconsin predicts that farm operators must become

Agricultural and business skills that you learn today can provide you with an opportunity as a manager-operator.

Photo by Chuck Cromer

skilled in management strategies to effectively compete in the future. "The technological revolution will be replaced by a management revolution," Weigle says. "Agricultural innovations are already a part of farmers' expectations. The time lag between introduction and adoption of new technology will be so short that profits from early adoption will be reduced," he pointed out. "Techniques of resource acquisition, financial control, personnel management, and purchasing and marketing will occupy a dominant role," he adds.

Returns from good management will be high enough to provide real satisfaction. According to Extension Economist H. B. Howell of the Iowa State University few businesses respond as rapidly in a relatively short time to improved management techniques as do farm businesses. Therefore, adopting new technology at an even greater pace, plus heavy dependence upon modern farm business management techniques for financial analysis and future planning, will characterize the successful farm business manager in 1980.

A number of changes in agriculture has set the stage for the management revolution. Capital has replaced a great proportion of labor. Size of farm business is increasing and will continue to rise. Changes in agricultural technology, data handling, human abilities, communication, transportation, and the size and nature of farm-related industries have also helped usher in this new management era.

These changes, as M. H. Sutherland, extension specialist at Clemson University points out, have resulted in the establishment of new guideposts that help farmers get right at the heart of managing. Such guideposts as high profit production enterprizes and efficiency practices have assisted farmers in using land, labor, machinery, and other capital to produce in line with the market demands.

The farmer of 1980 must find new ways of acquiring capital and increasing the size of business. Family accumulation will remain an important method of building up capital. However, the most rapid method of getting

(Continued on Next Page)

Professional Dairying

This dairyman faces the business of operating a modern dairy farm with vision and reality. He sees a bright future in the years ahead and believes the answer to success in crop and milk production lies in efficiency.

By Wendell R. Cochran

Building a herd requires good replacements and Jim handles them with care.

ALMOST all of his life James Davis of Masontown, West Virginia, wanted to farm, particularly dairy farming. Today, he farms 180 acres with his father and moves in and out of his high quality dairy herd like a professional. He can quote records, and crop yield figures as easily as a third grader does his multiplication tables.

Jim first became interested in livestock when he was five or six years old. A couple of years later he received his first cow as a gift from his parents. By the time he entered vocational agriculture Jim had acquired six head of Holsteins.

Three years later Jim and his father, Mr. Preston Davis, formed a partnership. Mr. Davis kept two-thirds interest in the operation and managerial control of the farm. However, both members of the partnership discuss new ideas before using them in the operation. Jim also provides a large portion of the labor. An older brother, William, just back from a tour of duty with the Air Force in Viet Nam, also might join the partnership.

While in the Mason Valley FFA, Jim held several chapter offices, including president. He was also active in school and community activities. The young farmer received the American Farmer degree and won the Star Crop Farmer award for West Virginia, the State Star Dairy Farmer award, and the Star Dairy Farmer for the North Atlantic Region. His FFA advisor was Mr. Richard Glass.

To insure that new ideas are always being brought into the operation, Jim and his father keep abreast by attending programs offered by the high school vocational agriculture department. They participate in the Masontown young and adult farmer programs, and also attend other agricultural events.

The Davis family owns 140 acres of fertile, semi-rolling land and rents another 40 acres. Their dairy herd consists of some 80 grade Holstein cows, with a total of 47 presently being milked. Facing reality that increased size is often necessary to succeed in today's agriculture, Jim has his eye on the time when they can milk 100 cows. "We have feed here for 100 cows," says Jim, "and my father and I both believe there's a future in dairy farming."

Both Jim and his father emphasize that the ability to raise home-grown feeds has been a large factor in their success. "We raise all the feed except for concentrates," says Mr. Davis. He added, "We also purchase other materials like fertilizer and seeds in season to get a better buy. For instance," he remarked, "we buy fertilizers in December to take advantage of seasonal discounts."

To get high quality feeds, the Davises put a lot of emphasis on soil improvement. Soils are tested every year and forage tests are conducted annually.

Jim and his father also follow a policy of extra-high fertilization on their crops. They use 1,200 pounds per acre on their corn and fertilize the pasture land yearly with superphosphate at a rate of 300 pounds per acre. In addition, the partners lime the pasture every two years and use only certified seeds.

All of this has paid off in efficiency for the Davises. The pasture improvement program has made it possible to pasture a cow on less than an acre. Their hay tested better than 16 percent crude protein and the corn silage produced as high as 68.6 percent total digestible nutrients. Thus enabling the Davises to cut concentrate costs.

To a dairyman like Jim, the true measure of success is milk production. When Jim started FFA the herd produced an average of approximately 11,000 pounds of milk. Since that time the Davises have increased the herd average to well over 12,000 pounds of milk per cow, based on a 305-day year. One top producer in the herd gave 19,500 pounds of milk and made over 700 pounds of butterfat.

Jim and his father are able to raise most of their herd replacements. Generally, they keep the heifers through their first calving and ship the bull calves at less than a week old. To handle the milking more efficiently the Davises installed a four-unit pipeline milker and a bulk tank.

With smiles, Jim recalls his first recollection of the farm. "I remember in the summertime when I helped with hay baling. I always drove the tractor, but I wanted to get back on the wagon and stack the bales. Now, that's my job, and I wish I could drive the tractor." In short, Jim followed in his father's footsteps to becoming a top farmer.

Notice the farm buildings in the background as Jim looks over his cow herd. They offer a real chance for expansion.

National FFA President Jeff Hanlon

National FFA Convention

Call to 42

PRESIDENT Jeff Hanlon has issued his official call for the 42nd National FFA Convention to be conducted October 14-17 at the Municipal Auditorium in Kansas City, Missouri.

In issuing his call, President Hanlon said, "A stimulating program featuring inspirational speakers and FFA leaders of past and present has been planned. In addition, we will be calling attention to FFA achievements, recognizing supporters of the FFA, and plotting the course of our organization for the coming year. With the participation of each and every member in attendance, we are looking forward to an enjoyable and rewarding convention."

The Convention will begin with the Vespers Service on Tuesday evening, October 14, and will conclude with the program on Friday evening, October 17. Official delegates representing state associations are expected to be present in Kansas City at 9:00 a.m. on Tuesday for the delegate orientation and the officer-delegate luncheon. All state associations in good standing with the national organization are to be represented by two official delegates, plus one additional delegate for each 10,000 members or major fraction thereof above the first 10,000, and two alternate delegates. All American Farmer degree candidates, award recipients, candidates for national office, and chapter representatives should be present for the first session Tuesday evening.

Each chapter is encouraged to send representatives equal to six members or 10 percent of its total membership. This figure does not include award winners or special convention participants. The representatives should be carefully selected, registered, and oriented using the booklet "You and Your National Convention" as a guide. A supply of this booklet is provided each state which makes them available for those chapters sending representatives to the National Convention.

Do not come to the National Convention unless you are properly registered before you leave home. Your advisor should receive a supply of official registration cards for your chapter in advance from your state FFA office. Registration will be by chapters at the convention and your card must be signed by your vocational agriculture teacher, your principal or superintendent, and yourself. The only exceptions will be for official delegates, band and chorus members, American Farmers, student teachers, collegiate FFA members, state staff, parents, and guests.

Center Development Continues

A SECOND meeting of the entire Center Development Committee was held May 22-24 in West Virginia, Washington, D.C., and at the National FFA Center in Alexandria, Virginia. (See "Center Development: A Progress Report" in the April-May issue.) Committee members are Jeff Hanlon, national FFA president; Joe Martinez, national FFA vice president; Dr. A. H. Krebs, head of the Department of Agricultural Education, Virginia Polytechnic Institute; Mr. James D. Maddox, FFA executive secretary, Kentucky Leadership Training Center; Mr. William G. Smith, president, National Vocational Agricultural Teachers Association; Mr. J. A. Marshall, Vocational Agricultural Education, Texas Education Agency; Mr. James W. Warren, program officer, U.S. Office of Education, Charlottesville, Virginia; Mr. Carlos H. Moore, state supervisor, Agricultural Education, Arizona; and H. N. Hunsicker, W. P. Gray, L. H. Gamage, ex officio.

The major purpose of this meeting was to observe other Centers and to study their methods of financing and operation. Centers visited included West Virginia 4-H and FFA Camps, and the National 4-H Center in Washington. In addition, helpful reports were received from Farmland Industries, Kansas City; the Kentucky FFA Camp; and the Donaldson Brown Center in Blacksburg, Virginia.

Much useful information was gathered which will help in making decisions on the proposed FFA Conference Center. It was found that in nearly all cases future construction at Centers will be based upon two persons per room with private bath. Noted also was the fact that conference groups often require many small rooms that can accommodate 15-25 persons. Cafeteria food service offering various choices of food was preferred over family-style.

The Center Development Committee requested at the first meeting a revised sketch from the architect. This was presented, discussed fully with the architect, and will be shown at the National FFA Convention. The committee approved the revised architectural plan for use as a basis to conduct an economic study, realizing that there are many additional changes needed to meet the FFA's functional requirements.

Unanimously, the Committee members requested the Board of Directors, at their July meeting, to appropriate sufficient funds to conduct an economic study. Proposals are now being solicited from independent economic consultant firms. Hopefully, this report will be available to the Committee in time for presentation at the National Convention.

Additional questions being studied by the Committee include zoning requirements, financing, proposed programs to be conducted for FFA members, and other legal problems in establishing and operating a conference center. The Committee intends to study fully all aspects of this project before making recommendations to the Board of Directors. They encourage your suggestions and comments which may be sent to the Center Development Committee, c/o National FFA Center, Alexandria, Virginia 22309.

FFA Foundation Meets

Mr. Donald Danforth, chairman, Sponsoring Committee.

Mr. Sam White, vice-chairman, Sponsoring Committee.

THE annual meeting of the FFA Foundation was held in Washington, D.C. on July 30, 1969. This was the annual joint meeting of the National Board of Trustees of the Foundation and the National FFA Officers with the Foundation Sponsoring Committee.

The Sponsoring Committee is composed of representatives of the various companies and individuals who support the Foundation through their cash contributions. The money they provide makes possible the incentive awards program for FFA members.

The meeting began at 9:30 a.m. at the Mayflower Hotel, with Mr. Sam White, first vice-chairman of the Sponsoring Committee and executive vice president of White Motor Corporation, presiding. Other speakers included Mr. H. N. Hunsicker, national FFA advisor and Mr. Donald N. McDowell, executive director of the Foundation.

The program included a showing of the movie, "FFA—Focus on Forty," which was made at FFA's 40th Anniversary National Convention held last fall. After the movie, National FFA President, Jeff Hanlon interviewed three of the "stars" of the movie: Joe Boyd Spencer, 1968 Star Farmer of America; Donald Pilkinton, national public speaking winner; and Jerry Batts, national FFA secretary.

The group also heard a report on the Foundation's activities and plans for the future. About 150 people attended the annual meeting. Prior to this combined meeting, the Foundation Board of Trustees met for two days on Foundation business and the awards program.

Organized in 1944, the FFA Foundation provides the opportunity for business, industry, organizations, and individuals to join in support of the incentive awards program for deserving FFA members.

The 1969 chairman of the Foundation Sponsoring Committee is Mr. Donald Danforth, Jr., executive vice president of Ralston Purina Company.

More than 100,000 FFA members are recognized each year through this program. Foundation medals go to the Star Greenhand and Star Chapter Farmer, cash awards are given to each Star State Farmer, and all American Farmers receive a Foundation check at the National Convention. From the American Farmers, four regional Star American Farmers are selected with one being named Star Farmer of America. For the first time this year, a Star Agri-Businessman will also be selected from the American Farmer candidates and this award will be presented at the National FFA Convention.

Special recognition is provided by the Foundation in 13 different categories through the Agricultural Proficiency Awards. These awards cover agribusiness, agricultural mechanics, crop farming, dairy farming, farm and home electrification, forestry, home improvement, livestock farming, natural resources development, ornamental horticulture, placement in agricultural production, poultry farming, and soil and water management. Local winners receive medals with cash awards going to those at the state, regional, and national levels of competition.

In addition, the Foundation sponsors the public speaking contest; national judging contests in dairy cattle, dairy products, livestock, meats and poultry; and two awards for chapters. This includes the chapter awards program which provides standard and superior ratings within the states and gold, silver, and bronze emblem awards nationally, and the chapter safety award to recognize the best FFA chapters in community and farm safety.

Management-An Inroad

control over capital has been to combine ownership and renting land. Many farmers now own a headquarters unit and also rent adjacent parcels of land as they become available.

Leasing many capital inputs such as machinery, buildings, and breeding stock will also become more prevalent. There will be increased use of operating capital from many sources. Existing credit sources will likely provide capital more on the basis of farm income generating capacity than on equity or assets alone. Farm supply agencies, meanwhile, will increase credit to gain and keep customers. For example, the feed dealers will provide advice in the form of a product-service package. This will help the farmer in the management of his operation and allow him to take advantage of volume discounts.

Farm managers of the future must plan to provide the quantity and quality of products consumers demand. To reduce price risk, they will use the futures markets and undertake forward selling and contracting to a greater extent. Hence, more farm operators will sell their crops before they are harvested and their hogs and cattle before they are fed out.

Likewise, the large volume of borrowed capital will demand the use of various management tools to achieve tight financial control. These tools include business projections, financial statements, profit-and-loss statements, cash flow budgets, and other management analysis records.

Because of the relatively complex nature of procedures involved, farmers may want to hire professional help. In addition, new managers will be attracted into agriculture, providing they can gain control of the capital resources necessary to start an efficient farming unit. As a young man seeking to break the entry barrier into farming you may be one of these new farm managers. And, as a farm manager in 1980, you'll find that the business skills you learn now will bring more success than those used by farm managers today.

LAND HANDLER

This young farmer uses alfalfa and pasture management to save soil and water.

By Ron Miller

WILLIAM Thomason of Stillwater, Oklahoma, Chapter believes that a complete conservation program not only raises the value of land and increases production, but it also improves farming efficiency. While Bill and his brother Charles, also a State Farmer, were converting Class VI and VII land into Class I land, they upped their wheat, hay, and pasture production by as much as 20 percent per acre each year.

In 1960 Bill and Charles pooled their savings for a down-payment on a 160-acre farm and secured a loan for the balance. About half of the land was good bottom cropland and the rest was native pasture. However, two high points were severely damaged by erosion and they caused runoff to lower land.

Operating the farm as full partners, Bill and Charles set up a crop rotation plan and planned a conservation program. They sowed one-third of the cropland to alfalfa on a 5-year rotation and some to wheat using a rotation of 10 years. The rest of the cropland which was to serve as layout ground for the following year was planted to Austrian winter peas.

Annually they paid dozer operators for moving dirt, filling ditches, leveling, terracing, waterway shaping, and clearing fence rows Finally, about two years ago, the brothers completed the land improvement plan and now keep the erosion problem under control by correct plowing and working of contours and terraces. They maintain over 6,000 feet of terraces on this farm.

For their Hereford cattle herd the young farmers filled the old stock pond, built a new farm pond, new fences, and a 50 feet x 50 feet cattle corral—complete with working equipment Bill's herd consists of 38 head of breeding stock —some of which he sells to ranchers and youth—and steers which he sells at auctions and fairs. Because of a shortage of pasture, he also leases about 16 bred heifers to a local rancher for half the profits. In addition, Bill has sold over $2,000 worth of colts raised from his Shetland mare.

Bill and Mr. Warren Burns, conservation technician study the farm's soil map and plan the land program.

Following the plowing of this wheat land, Bill will disc or cultivate and springtooth the soil before planting time.

Bill plows his land from 8 to 10 inches deep in June right after harvesting the wheat to aid straw decay. To conserve moisture and kill weeds he later follows with a cultivator or disc. In late August he uses a springtooth to settle the ground and plants the wheat in the first half of October.

Bill and Charles fertilize the wheat with 60 pounds of 18-48-0 per acre in the fall and put on 30 pounds of nitrogen per acre in the spring. They apply gypsum and 300 pounds of super-phosphate per acre to the alfalfa ground and spread 10-20-10 and ammonium nitrate—both at a rate of 100 pounds per acre—on the Bermuda grass waterways.

The young farmers get three to four cuttings of alfalfa each year, and most of the time, sell surplus hay that is not fed to cattle. They hire the cutting, baling, and hauling for half of the hay crop.

Bill combines his wheat according to requirements for moisture content. At that time he decides whether to store or sell, depending on the market. Bill says, "Our yields officially averaged 30 bushels per acre, which is consistently well above our county average of 26 bushels per acre. Last year's crop even averaged 42 bushels per acre, as compared to the county average of 29 bushels." His wheat samples also place well in state competition. One sample won the Oklahoma State Wheat Contest and took the championship at the Tulsa State Fair.

To complete their land management plan, Bill and Charles use range management and controlled grazing. They run cattle at a rate of 10 acres per head on native grass, older alfalfa, sweet clover, and wheat. For supplemental feed and conditioning they pasture cows on hybrid sudan on a two cow per acre basis.

Their pasture program also includes annual spraying of the native grasses to control brush and weeds. In addition, they follow a practice of grazing one-half and leaving one-half on the native pasture. In the last few years the partners have cleared brush and trees from about 10 acres for more native pasture.

On his own Bill rents another 88-acre farm which he uses

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Land Strategy

Save Soil With Water

By Ron Miller

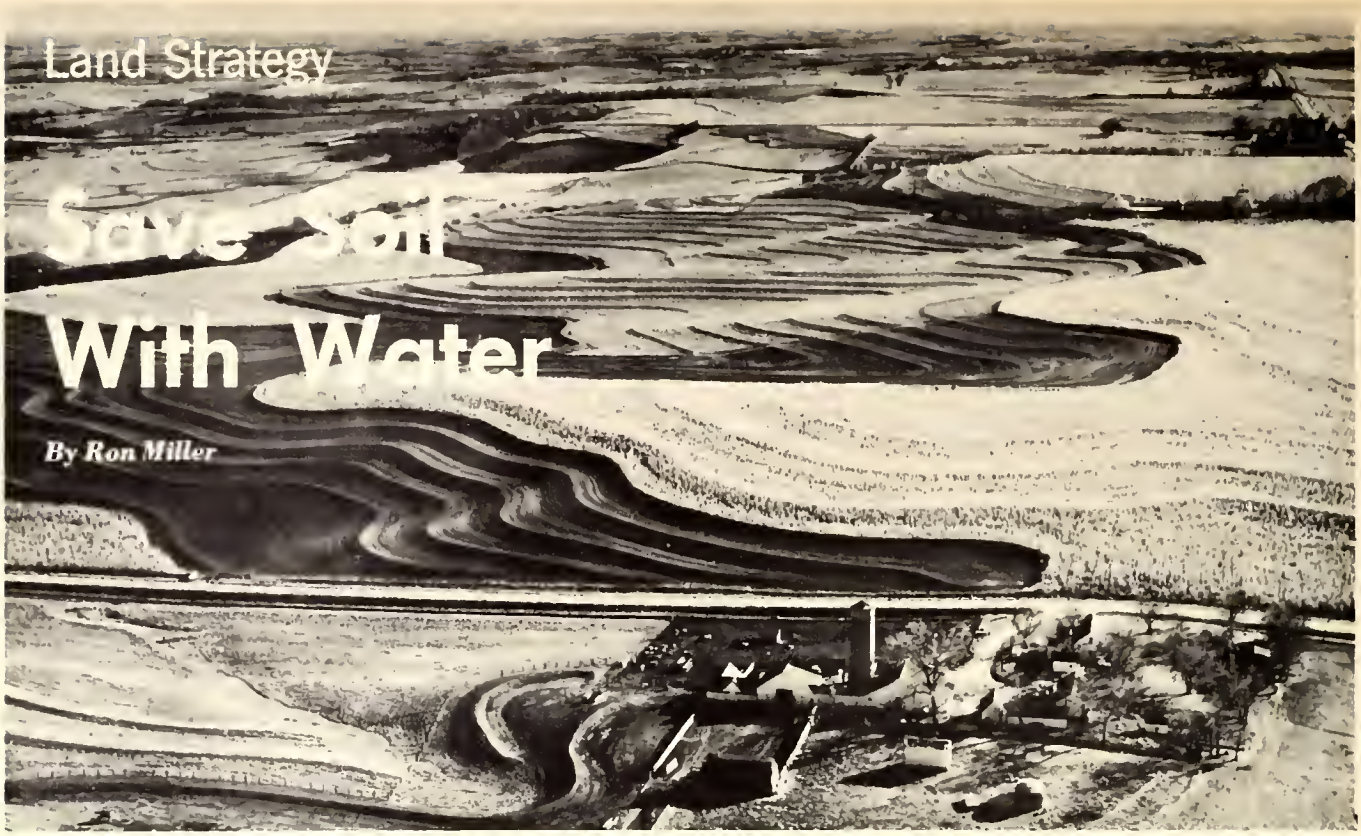


Photo courtesy of USDA

Applying a water control plan to land can make farming goals easier to reach by saving soil and increasing production.

EROSION causes farmers millions of dollars in losses to crops and cropland each year. Besides soil losses and a reduction in crop production, consideration of fertilizer losses must be taken into account. With today's high use of commercial fertilizer, holding these nutrients as plant food will mean fewer dollars "eroded away."

On pasture and rangeland much of the soil and water loss occurs from overgrazing. In farm woodlands, overcutting and grazing destroys the leaf litter which ordinarily protects wooded land. When irrigating or draining land, soil and water can be lost by improper procedures. Fallowed land is also fairly barren for long periods of time. However, in reality, nearly all erosion begins with man's failure to correct for the removal of natural ground cover.

Hence, farmers must plan and use correct conservation measures to save resources and increase production. And the way to begin effective conservation of land is with an overall water management program.

Planning

To start a water management program on your farm study the layout of the farm with your father and a soil conservation technician. The conservation expert will be able to provide valuable information concerning the various measures open to you and help you implement them. He can also explain the possibility of receiving governmental assistance in some areas, if several neighbors apply water management simultaneously.

You can also purchase an aerial photograph from the Agricultural Stabilization and Conservation Service (ASCS), or if you like, sketch a detailed, accurate map of fields, fences, pastures, and terrain. From this information and technical assistance, you and your father will be able to decide how far to go with farm water management each year. Thus, you can arrange the investment accordingly.

Layout

Some of the fields will require practicing of curved-row farming techniques when plowing, planting, cultivating, and harvesting. Thus, by strip cropping and crop rotation, you will be able to correct most of your erosion problems. When used in place of straight-row cropping, curved-row farming will reduce soil and fertilizer losses sharply.

Terracing works even better. Some fields will have sharp curves or deep hollows in them. These curves will need straightening and probably will require some cutting and filling. In many cases terracing such cropland will lower soil losses by 85 percent as compared to straight-row farming.

Fig. A

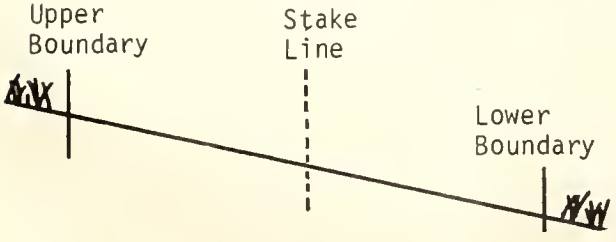
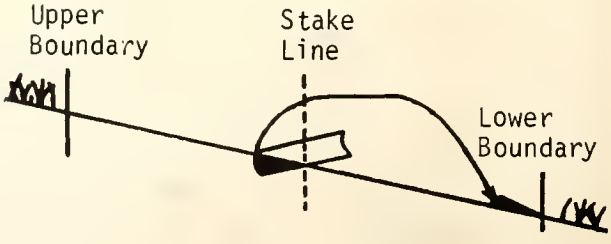


Fig. B



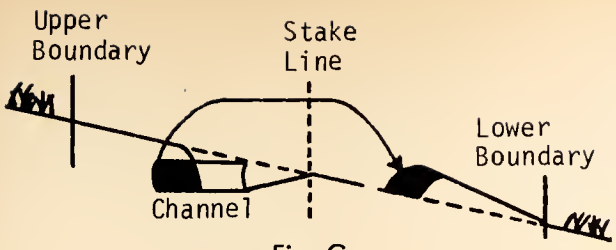


Fig. C

After the water management plan is completely worked out and the water ways are sodded or the underground pipe system is laid, the terraces and contours need to be staked out. Again, because staking a terrace requires great skill, seek the help of a soil conservationist or your vo-ag instructor.

Terracing

When making a terrace, the tractor should be in good mechanical condition, especially the brakes and the hydraulic system. Also, of importance is the draft control characteristic of the tractor and scraper blade. In many ways, a stable tractor hitch and a dependable hydraulic lift will determine the quality of a terracing job.

Another important point is that the tractor operator needs a clear picture in his mind of the desired result. This will act as a guide to knowing what the intermediate stages of the terrace should look like. It will also help minimize operating time and blade passes.

Moving and cutting dirt while building a terrace should be done at right angles to the direction of the tractor travel whenever possible. Also, when cutting ground the moldboard should be pitched backwards. However, while moving loose dirt, it is necessary to forward pitch the moldboard.

To prepare land for terracing (Fig. A), cut the foliage and remove it from about 25 feet above and below the stake line. Disc the cleared area, but do not plow it, unless advised by your conservation technician, since plowing is generally undesirable. Mark the upper and lower boundaries by making consecutive light cuts parallel to the stake line. Tilt and angle the blade sharply and make these cuts about a tractor's width apart until the boundaries are reached.

The first deep cut (Fig. B) is made by driving the center of the tractor directly over the stake line. Tilt the blade to a steep position and cut so that the dirt moves down the slope. Limit the depth of the cut to insure accurate steering and smooth curves.

After completing this full pass along the terrace, raise the blade and reverse the moldboard. Adjust the pitch for moving loose dirt and, while staying parallel with the stake line, push the dirt down the slope. Keep reversing the blade at the end of each pass and continue moving the dirt to the lower boundary.

Repeat this cutting and moving cycle at about the same width cut each time until the terrace is finished. When piling the dirt on the front slope, heap it high enough to make

Land Strategy

Photo courtesy of Danuser

A blade attached to a farm tractor does a fine job of leveling waterways and terracing. It's economical, too.

room for all the dirt from the channel. To do this and compact the soil at the same time, the tractor tires will have to run on loose dirt.

On about the fifth cutting pass (Fig. C) the channel should be completed. When the 15th cut (Fig. D) is made, the loose dirt from it should complete the peak of the front slope On about the 20th cut (Fig. E) the ridge of the back slope should be smoothed out and the backside of the front slope completed.

Remember, however, that the width of a terrace will vary indirectly to the degree of the original slope of the land. This means that the number of cuts in each figure may vary some in your situation.

With the help of your soil technician, check the slopes and channel with a surveyor's level for low or high spots which require building up or cutting and mark them. The short, low spots along the terrace can be fixed by widening the channel and, with the moldboard reversed and in the dozing position, pushing the dirt to the top of the front slope. For long, low sections deepen and widen the channel as done in the full length cutting and moving cycles. Finally, drive to the front side of the slope, smooth it, and pack it.

Final Note

Since water is essentially an agricultural resource, saving it adds to the importance of a practical water management program. Therefore, no matter whether your conservation plan requires crop rotation, strip cropping, contouring, or terracing, a practical soil and water program will, in the long run, increase your profits and lower production costs.

Fig. D

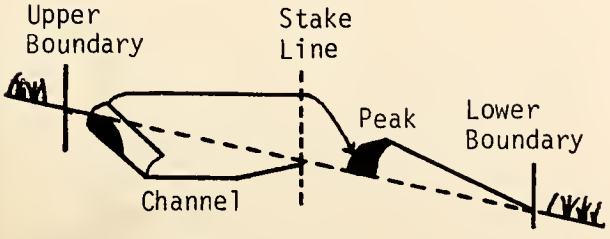
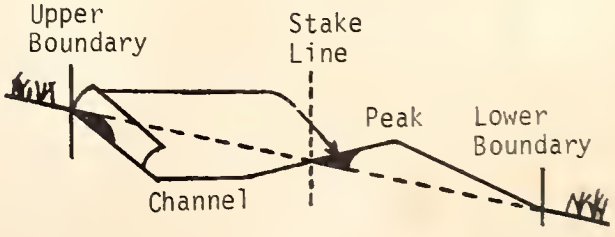


Fig. E



Land Strategy

What's land worth?

Photo courtesy of USDA

Even though urban and industrial expansion continues to raise land values, vast acres should remain in farmland.

DURING the last decade, farmland values have risen 70 percent—faster than the general level of all prices. In this day and age, while trying to get started in farming or maintaining growth in your enterprize, buying land becomes an even bigger problem. The sellers of farmland also face many puzzling situations.

As a young farmer you are competing with industry, urban population, and other farm operators for land on which to expand. This raises the value per acre and either increases the amount you must borrow to purchase the land or decreases the number of acres you can buy.

In one case a farmer and his wife were getting on in years, but they still had plenty of good ones left to put into their prosperous livestock farm. And that's just what they wanted to do.

When the developers of a nearby town first approached them six years ago about buying their farm, they turned down the offer. When the developers came back and offered them more than they could earn during the rest of their lives, they still held out.

The developers still kept trying to purchase the farmer's farm. Finally they offered the farmer top price for the farmland, plus the title to a similar livestock farm nearby. The farmer could have the money and continue farming, too. He signed on the dotted line and, he and his wife have been happily working their new livestock farm for the past five years.

While this farmer's case may not be the most typical situation, it points out many problems facing both land owners and buyers of farmland.

By March 1, 1968, the national index of average value per acre of farmland and buildings had risen 6 percent above the value a year before and 2 percent over November 1, 1967. Estimated total value of all farmland and farm buildings in March 1968 came to $193.7 billion, or $178 per acre. And for commercial farms (averaging 550 acres), the estimate was about $100,000 per farm.

What's been pushing the values up? There is no simple answer. What's true in one area might not be true in another. Each sale or transfer of farmland represents a different mix of market forces which influence buying and selling, incentives and prices.

Industrial and population centers are stretching further and further into the country, however. Land for recreation purposes is in heavy demand. And the number of two-home families (one in the country) is increasing. All this has tended to push up land prices in many areas.

But, nearly two out of every three purchases of farmland today do not contribute to urban expansion, to recreational facilities, or to second homes. They are made by farm operators who want to enlarge their farms.

This is probably the main reason why farmland values in general remain remarkably sensitive to expected agricultural returns.

For example, during 1958-1962, the average net annual return on an investment in farmland was about 3.5 percent of the market value. In 1963-67, the return was closer to 4.0 percent.

The value of land rose in similar fashion. The average landowner whose land increased in value more than 5.5 percent a year for the last 10 years saw his land go up 4.4 percent in value during 1958-62. In 1963-68, it went up 6.6 percent.

How long will farmland values continue to go up? Economists point out that modern technology is producing more and more from fewer acres. Continuing advances can be expected to "stretch" the acre even further.

These economists emphasize that enormous areas are likely to remain as farmland for many years to come—regardless of urban and industrial expansion into the country. Therefore, as land becomes no longer the primary limiting resource in agriculture, its value for such uses is expected to gradually level off. This could offer more hope to the young farmer seeking to expand his land acreage.

LAND HANDLER

(Continued from Page 17)

for growing 68 acres of wheat and 20 acres of alfalfa. On this farm he assisted in the organization of another conservation plan and helped construct over 30,000 feet of terraces. Bill works another 140-acre farm and receives one-sixth of the profits for his labor.

Bill and his brother operate the machinery on their father's farm and in exchange obtain the use of his equipment. The partners also trade labor for equipment with an uncle who lives nearby.

In FFA Bill found time to serve as president and secretary of the Stillwater FFA and as chairman for several committees, including the supervised farming committee. He won the 1968 National Soil and Water Management Proficiency award and was a member of the state champion livestock judging team in 1966. Further, he won a silver emblem at the American Royal and placed high, individually and on a team, in other contests. Bill won his area FFA speaking contest in 1967 and county soil conservation speaking contest in 1966.

He served on the student council and was a member of the state honor society throughout high school. He also was a member of the National Honor Society. In 1967 the young man was selected by the governor as one of the two Oklahoma representatives to the National Agriculture Youth Institute at Lincoln, Nebraska.

In discussing agriculture Bill says, "Our family has always been close to farming. My Grandads, on both sides of the family, came to Oklahoma when the Cherokee Strip opened in 1893. Both families have been raising wheat and cattle ever since."

Livestock Market Training

This marketing "lab" uses 1,200 pound steers, slaughter hogs, and sheep as laboratory animals.

By Robert Rice

WHAT could be a better setting to learn about buying and selling livestock than in a "lab" where more than a million dollars worth of livestock trades hands every market day? Such a setting is offered by Morningside College in Sioux City, Iowa, in a specialized "on-the-job" livestock marketing training program.

In addition to regular classroom work, students spend two days a week at the Sioux City Stockyards working with market agents, order buyers, veterinarians, meat inspectors, and others involved in the fast-paced world of livestock marketing. Most of the students enrolled in the two-year livestock marketing course are working toward a four-year degree in business administration.

"When students first enter the course," says Mr. Dick Weikert, instructor of marketing, "they often have little idea of how much work goes into marketing—of what you have to know to be successful at it. By the time they graduate they have a much greater appreciation of the job that professional livestock buyers and sellers do."

Marketing students don't just observe what's going on at the yards. By working with market men, they get involved to a much greater degree than they could through classroom work alone. They "listen in" on actual trading transactions between market agents and buyers in the pens, work with market news reporters and accountants, and observe scale testing and brand inspections.

Students also enter pens to determine the cost, grade, and yield of livestock on the hoof, then follow the animals through packing plants to see how their computations compared to actual carcass data. Occasionally they visit feed mills and meat retailers, and accompany market agents to a customer's farm.

Many of the marketing students are past members of FFA. The majority come from the Midwest, but a few are from as far away as New York.

Many of the students attend Morningside just because of the unique marketing program. One of them is David Hartle of Owatonna, Minnesota. David, a transfer from Rochester (Minnesota) Junior College, is also a varsity performer on Morningside's championship wrestling squad.

"I decided on Morningside after learning about the marketing course," David said. "I may go into farming or some farm related career, but either way, the experience I gain here will be valuable."

"This is an action study," David emphasized. "We go right out into the heart of the livestock industry, see the various operations, talk with the people involved, and learn marketing procedures first hand."

The marketing course at Morningside presents a broad picture of marketing. They teach students about the different methods of marketing, how weighing conditions can make a big difference, and many other crafts that livestock buyers sometimes use.

"Between 20 and 30 percent of our students return to the farm," Mr. Weikert emphasized. "Many of the others go directly into livestock marketing as order buyers, packer buyers, or market agents. Others become market reporters or fill positions with stockyard companies. Some go into sales work with feed, machinery, or chemical companies. Others join the agricultural staffs of banks or insurance companies."

Another thing that makes the marketing course a big success is the cooperation it receives from personnel at the stockyards and in the marketing and packing industry. Stockyards personnel travel the short distance to the Morningside campus to lecture on different aspects of stockyards management. The Sioux City Livestock Exchange and the Livestock Market News Foundation also lend encouragement by offering several awards and grants.

The Exchange grants $250 to the top first-year student. Awards of $250 each are also given by the Market News Foundation to the top three senior students in the area high school Future Farmers of America livestock judging contest held at the yards every spring.

Livestock marketing students learn to evaluate livestock by judging animals "on the hoof" and judging the same carcasses "on the hook" in packing coolers.

News from International Harvester

Monitor Control featured on giant new combines

As modern combines get bigger and more complex, the operator finds it more and more difficult to keep track of each separate machine function. He also has to make the right adjustments at the right times to maintain top harvesting efficiency.

That's why International created Monitor Control on their new giant 815 and 915 combines. Monitor Control is an exclusive combination of over 30 gauges and controls that gives a constant reading of most machine operations—and lets the operator make instant adjustments or corrections.

For instance, a warning horn sounds if the elevator drive starts to slip. A special gauge shows when the engine is overloaded. And there's even a gauge that indicates when the engine air cleaner needs servicing. In short, no combine before has ever done so much to take the guesswork out of combining and give the operator such finger-tip control.

Among the largest combines being built today, the 815 and 915 are powered by International V8 engines with up to 144 hp and have grain tanks up to 150-bushel capacity. Besides Monitor Control, other control and convenience features include Hydrostatic All-Speed Drive as standard equipment and the new Comfort-Control cab with heater and air conditioner as optional equipment.

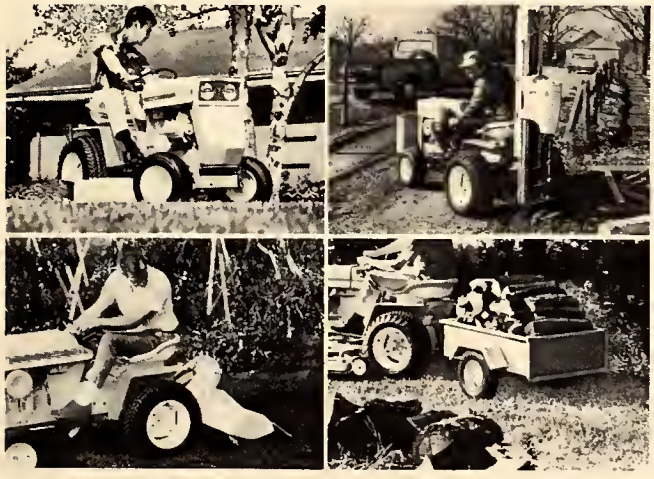
Lawn and garden tractors popular on farmsteads

If anyone has more than his share of grass to cut, it's the farmer. And to maintain an attractive carpet of green around his farmstead, he is turning to handy and compact power. That's the slot where lawn and garden tractors fit in.

Besides mowing, what are some of the farmstead jobs that International Cub Cadet lawn and garden tractors take to with relish? Cub Cadets cut the weeds, sweep, thatch, till, seed, cultivate. And they spray, fog, load, scoop, clear snow, rake, blade, backfill, dig post holes and can even generate emergency standby electric power!

Today's farmer has a choice of several Cub Cadet power sizes just as he has with the big International tractors. There are two types of transmissions available—an all-gear drive in 7, 10 and 12 hp models—or no-shift, no-clutch Hydrostatic Drive in 10 and 12 hp models.

In recent weeks, a new, higher-powered tractor has been introduced by International. This tractor is the 15 hp Cub 154 Lo-Boy with a long-life, water-cooled engine. So now you are equipped better than ever to handle the jobs that need doing all around the farmstead.



First to serve the farmer

International Cub, Cub Cadet and Lo-Boy are registered trademarks of International Harvester Company, Chicago 60611.

Free booklet tells why Hydrostatic Drive is different. Write for your copy today.

A new International cartoon-style booklet, "Hydrostatic is Different" gives you a quick and easy explanation of what Hydrostatic Drive is, how it's different from any other transmission. You'll learn how Hydrostatic drive boosts productivity in tractors, combines, windrowers, cotton pickers and lawn and garden tractors.

For your free copy, write: International Harvester Company, 401 N. Michigan Avenue, Chicago 60611.

Now read what owners of International Hydrostatic Drive tractors think of this entirely different kind of transmission!

A 17-year-old says, "for plowing, the Hydrostatic 656 is great because you can go any speed and save lots of time when your plow bottom breaks back. The same goes for PTO work—you can go just the right speed."

And a wife's comment: "I don't like to bale, but this is the only tractor I've used baling that I've really enjoyed." Other comments:

"I like the 656 because you have the right power and right speed at the right time."

"I have two boys—14 and 15. I thought the 656 was the safest tractor for them. They say it's the best tractor to drive and the easiest to handle. No clutch and you cannot jerk the tractor so there is no danger of falling off. I sure like it and the boys do not let me use it much."

The sound investment equipment—worth more when it's bought, used, traded

Multiple Calves Mean More Beef

Photo courtesy of USDA

HOW about cows that produce two calves per delivery, with sex made to order? This may sound like a dream, but if current research in the physiology of cattle reproduction is successful, it won't be long.

In a test conducted by the Agricultural Research Service (ARS) of the USDA, beef cows that conceived after a hormone treatment weaned an average of 1.11 calves—well above the .85 generally weaned in good beef herds.

The cows were injected with pregnant mare serum (PMS) twice—during the early and late stages of the estrous cycle. PMS stimulates the ovary to produce eggs and serves as a substitute for the natural follicle-stimulating hormone (FSH). At the end of the cycle, the cows were injected with a gonad stimulating hormone to assure ovulation, that is, the shedding of eggs.

In the first mating, 52 of the 81 cows treated with the hormone conceived. Counting only offspring that survived, they produced 29 single calves, 12 sets of twins, 8 sets of triplets, 2 sets of quadruplets, and 1 set of quintuplets.

As might be expected, multiples were lighter at birth than single calves. Twins and triplets averaged 55 pounds, while quads and quints averaged 34 pounds, compared with 83 pounds for single calves. The quads and quints also presented management problems.

In part, light birth weight can be accounted for by the length of gestation. It ranged from 277 days for twins to 258 for quints, compared to 281 days for single calves.

By weaning time twins and triplets averaged 374 pounds and quads and quints 332 pounds. All of these calves were raised essentially as twins—using foster mothers as needed and providing access to feed.

Singles, raised as singles without feed, averaged 462 pounds. Thus, offspring from the average cow with multiple calves produced 746 pounds of beef at weaning—more than 1½ times the output of cows with single offspring.

In addition to the production of more pounds of beef per cow, there is the possibility of lowering the maintenance costs of the cow herd. Of course, extra calves will require more feed and care. But, these costs should be less than the investment savings on fewer cows.

Consequently, twinning would allow a farmer to cut down on cow numbers and increase or maintain feeder numbers at maximum efficiency. Also in confinement operations, calves could be weaned earlier, thus enabling cows to be bred back faster.

Practical Problems

While results are encouraging, a number of practical problems were brought out.

First, 48 percent of cows with multiple calves did not expel their placenta naturally. Compared to the 2 or 3 percent found in normal herds, this poses a big management problem.

Second, 25 percent of the cows raising twins did not rebreed, perhaps partly because of the heavy stress on cows giving birth to twins. Furthermore, these cows did not have enough milk for two calves. It appears that both problems may be solved by crossbreeding breeds with dairy cattle.

Third, the treatment is costly in materials and labor. The price of hormones now run about $7.00 per cow. New and cheaper methods for making mass-produced hormones substitutes must be devised.

Since synchronized cows can be treated and managed as a herd rather than as individuals, labor costs will eventually be reduced. Research now underway permits workers to combine treatments for multiple births with treatments for estrous synchronization.

Manipulating Dosage

To get the basic idea of how hormone dosage affects ovulation, another group of USDA physiologists treated 61 heifers, two and three year olds. To stimulate egg production they used FSH obtained from sheep and horses.

The five-day treatment, two injections daily, started on the eighth day of estrus, which had been synchronized by feeding progestrone. Sixty to 72 hours after being bred naturally, the eggs were checked for fertility.

The best dosage, 6.25 milligrams, resulted in an average of 2.1 eggs ovulated per cow. Half that dose produced too few eggs, 1.1 per cow, and a double dose yielded too many, 8.0 per cow.

Furthermore, high doses of FSH caused fertilization of eggs to drop. The postbreeding exam showed a 93 percent fertility rate in eggs from heifers getting the best dose. At the double dose, the fertilization rate went down to 79 percent.

Forthcoming Research

In future research, scientists hope to increase the number of twins and triplets while reducing the sets of quads and quints. Maybe even predetermine the calves' sexes. In any event, because of the potential of multiple calves, ARS and many university livestock researchers will try new sychronization methods, hormones, and doses. Hence, by studying the practical problems involving the treatment of beef cows with hormones, multiple births may soon be a reality.

THE CHAPTER SCOOP

news, notes, and nonsense from everywhere

by Jack Bitzer

All members of *Silver Lake,* Massachusetts, FFA received a state pesticide license to assist in their horticulture training.

N-N-N

Each year, *Couch,* Missouri, FFA takes Greenhands to the National Convention.

N-N-N

Goal of Greenhand initiation at *South Stokes,* North Carolina, Chapter was to project image of modern farmer. "Gets rid of a hick image."

N-N-N

Arnold Ahrens and **Don Summers** earned Arkansas State Farmer degree. First ones for *Lamar* Chapter.

N-N-N

Moved and passed at *Miller,* South Dakota, Chapter meeting to have another Senior Steakfry. For seniors and advisors.

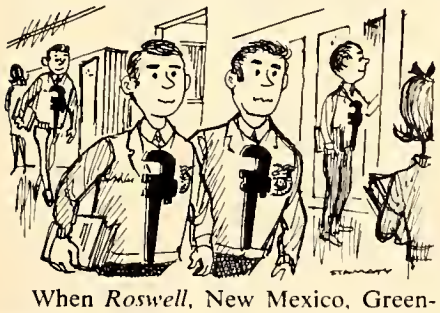
N-N-N

Denison, Iowa, Chapter held freshman welcoming bowling party.

N-N-N

After the *Winner,* South Dakota, Chapter meeting they went to a drive-in for ice cream.

N-N-N



When *Roswell,* New Mexico, Greenhands were initiated, they had to wear a 12 inch wooden wrench around their necks for a week to school.

N-N-N

Petersburg, West Virginia, Chapter observed National Wildlife Conservation Week. Put on an exhibit downtown.

N-N-N

Mike Tuma, *Lebanon,* Oregon, (State Forestry winner) operates a Christmas Tree Ranch. Owns half of it, too.

N-N-N

St. George, South Carolina, FFA members rewired their vo-ag shop.

N-N-N

Greenhand **Windler Schweer,** *Covington,* Oklahoma, chalked up two for safety—first in safety poster contest and first in essay contest.

N-N-N

Grantsville, Utah, FFA put on a patriotic assembly for school. Invited a local National Guard general to speak.

Charleston, Illinois, FFA visited Chicago. Saw usual sights and movie, "Funny Girl."

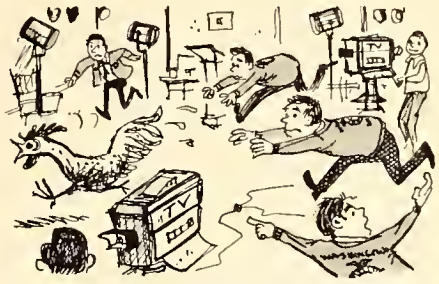
N-N-N

Reporter of *Mariposa,* California, says there was lots of competition in FFA election. So, they have a real good team of officers.

N-N-N

Each Greenhand in *Tucumcari,* New Mexico, FFA had to bake a cake. Advisor "had" to sample them.

N-N-N



Members of *Eatonville,* Washington, Chapter had two days to prepare for a TV appearance. Pulled it off with only one small problem—a rooster escaped in the studio.

N-N-N

President of State Wool Growers spoke at *Hondo,* New Mexico, Chapter Banquet. Tables were decorated with handmade wool flowers.

N-N-N

Greg Slipher attended the National Leadership and Citizenship Conference for chapter presidents courtesy of two *Frankfort,* Indiana Banks.

N-N-N

FFA members challenged school faculty to basketball game at *Sheffield,* Iowa.

N-N-N

Larry Ash got a bobcat on a recent *Orem,* Utah, Chapter hunting trip. Trip was supposed to be for rabbit hunting.

N-N-N

Many local chapters have been using FFA movies "Focus on Forty" (of '68 National Convention) and "1968 Four Star Farmers."

N-N-N

Lacrosse, Washington, FFA received their charter at State Convention this year.

N-N-N

Don't just talk about hired men, pros and cons of farrowing crates, or weeds in the crops. "It's boring on dates" writes a local FHA president.

N-N-N

Iowa State FFA Advisor Dalbey spoke at *State Center* Chapter Banquet.

Navasota, Texas, FFA members built a nine-stall farrowing house. Used lumber taken from an old school building.

N-N-N

Essex, Massachusetts, FFA ski team went on a trip to Ragged Mountain.

N-N-N

Danny Dorman represented *Fayetteville,* Arkansas, Chapter on courtesy corps at state convention.

N-N-N

Five adults including advisor Lloyd were installed as honorary members of *Broadus,* Montana, at chapter banquet.

N-N-N

The *Wilcox,* Arizona, Chapter pays one-half the price of new jackets for new officers. Makes sure they have bright new jackets.

N-N-N

Valley Heights FFA in Kansas reports having a magazine sale to raise money to send **John Hula** to National Leadership and Citizenship Conference for chapter presidents.

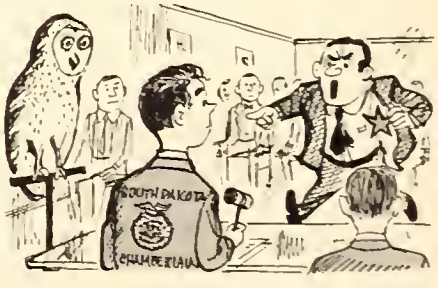
N-N-N

"We purchased several signs from FFA Supply Service, and erected them at entrance points to our community." From *Gray's Creek,* North Carolina, FFA. **Glenn Elliott,** reporter.

N-N-N

American Medical Association recognized *Middleburg,* Pennsylvania, Chapter for activities in promoting rural safety.

N-N-N



Chamberlain, South Dakota, FFA learned the hard way. If you have a big white owl for an advisor's symbol, put it out of sight when the game warden attends the meeting.

N-N-N

Chapter Star Farmer of *Garber,* Oklahoma, FFA is **Mike Murphy.** Star Greenhand—**Monte Kroll.**

N-N-N

Turner Ashby, Virginia, Chapter won state award for community service. Maybe they can give you ideas.

N-N-N

Don't let the basket get empty. What is your chapter doing?

Vo-ag safety training will supply more and better farm machinery operators.

Machinery Safety Training

FOURTEEN and 15-year old vocational agricultural students can now be hired to drive farm tractors and to operate other farm machinery upon completion of a safety training program.

On June 27, 1969, a new amendment to the hazardous occupations order was signed by the Secretary of Labor and adopted by the U.S. Department of Labor. This action was prompted by a request from the U.S. Department of Health, Education, and Welfare's Division of Vocational and Technical Education.

Two distinct safety training programs have been developed by the Division of Vocational and Technical Education. These programs have been approved by the State Boards of Vocational Education and are in accordance with official state safety programs. The safety training will be conducted by a certified vo-ag instructor, experienced in the safe operation of tractors and machinery.

In 1967-68, there were over 500,000 high school students enrolled in 8,725 approved vocational agricultural departments. Approximately 50 percent of these students were at least 14 years of age, but less than 16 years old. Of this group, it is possible that as many as 50,000 will participate in the programs.

Orders 5 through 10, which are listed in "The Hazardous Occupations Order Affects You" article of the June-July issue, prohibits the operation of tractors over 20-belt horsepower and other farm machinery by youths under 16 years of age. With the new safety training a student can secure such employment which will further his career objectives in agriculture. Employers, too, will benefit from the availability of better trained, safer, and more productive workers.

Tractor Operation

The first program includes a safety training course on the use, care, and the operation of farm tractors. Vocational agricultural students will be exempt from order 5 upon completion of the following requirements:

1. Are familiar with the normal working hazards in agriculture.
2. Have satisfactorily completed a 15-hour program such as the "Vocational Agricultural Training Program in Safe Tractor Operation" conducted by certified vocational agriculture instructors.
3. Have satisfactorily completed a 15-hour training program which includes the following units from the "Vocational Agricultural Training Program in Safe Tractor Operation" conducted by a certified vocational agriculture instructor:
   a. Pre-operating procedure.
   b. Adjustments to meet operating needs.
   c. Starting and stopping tractor engine.
   d. Controlling movement.
   e. Hitching to tractor-operated equipment.
   f. Operating under field conditions.
   g. Operating under highway conditions.
   h. Unhitching equipment.
   i. Refueling.
4. Have received a certificate, signed by the student's parents or guardian, and the vocational agriculture instructor who conducted the training, stating that the student meets all requirements listed in one through three, above.

Machinery Operation

The second program deals with the safe operation of other types of farm machinery. To be exempt from orders 6 through 10, vocational agricultural students must successfully complete the following requirements:

1. Are familiar with the normal working hazards in agriculture.
2. Have received a certificate signed by a certified vocational agriculture instructor to the effect that all requirements in program one have been met.
3. Have satisfactorily completed a 10-hour training program which includes the following units from the "Vocational Agricultural Training Program in Safe Farm Machinery Operation" conducted by a certified vocational agriculture instructor:
   a. Importance of farm machinery.
   b. Safety practices common to all farm machinery operation.
   c. Safety in tillage operations.
   d. Seeding equipment.
   e. Handling agricultural chemicals.
   f. Forage equipment.
   h. Wagons and trailers.
   i. Fork life operation.
   j. Augers, conveyors, and portable elevators.
   k. Farm equipment on highways.
4. Have satisfactorily passed a written examination developed to assure that students are familiar with operational procedures.
5. Have satisfactorily passed a farm machinery operation, safety, and skill test, designed to test the students ability to operate farm machinery in a safe and proper manner under simulated working conditions.
6. Have received a certificate, signed by the students' parents or guardian, and the vocational agriculture instructor who conducted the training, stating that the student meets all requirements listed in items one through five above.

Conclusion

Upon successful completion of the appropriate courses, the vocational agricultural student will present a copy of his signed certificate to his prospective employer. The employer will keep the certificate on file until termination of the employment. He will also be required to further instruct the youth on the safe and proper operation of the specific equipment used. The employer, or his representative, will also be required to check on the youth's safety at least at mid-morning, noon, and mid-afternoon.

Keep in mind that the certificates, or work permits, are not the same as the written agreements used under the occupational experience programs. The written employment agreement is needed when a student is working on his regular occupational experience program. However, vo-ag students, and all other students as well, will need certificates of exemption to work on farms that are not specifically included within their experience program. If you have any further questions regarding the new amendment and its application, ask your vo-ag instructor, or check with your Department of Labor office.

New Trends In Agriculture Careers

THE employment picture in America has been changing rapidly and will continue to shift even more in the next 10 years. Major economic trends are causing some job areas to expand greatly while others decline. For those on the threshhold of a lifetime occupation, it is of vital importance to know just what these trends are and to understand how they will affect the choice of a job.

A happy outlook for agricultural graduates—higher salaries and a strong demand—continues the trend of the last several years. Placement officers at 13 Midwest universities report that they could place some 4,700 agriculture graduates this past spring. However, they had only about 2,800 available for jobs. And of these, many will go into military service—about 25 percent—or graduate work—about 30 percent. These universities also reveal a 5.5 percent increase in estimated starting salaries as compared to a year earlier.

In general the biggest growth in career opportunities during the coming decade will be in occupations requiring the most education and special training —the "white collar" or professional and technical careers. This means that job opportunities will increase as high as 40 percent in fields such as teaching, medicine, science, mathematics, the ministry, business administration, home economics, journalism, and social work.

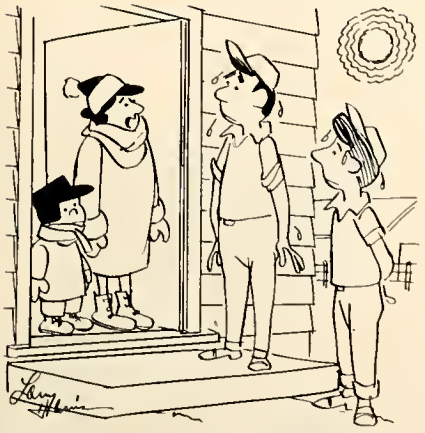
Opportunities for clerical and sales workers will be about 30 percent greater. And there will be roughly 25 percent more jobs for service workers such as policemen, filling station attendants, barbers and beauticians.

The population explosion presents another startling trend. In 1970, two million more teenagers will be seeking employment than in 1960. Many will be trained for one of the expanding fields. Another half million, including high school dropouts, will find only the poorer paying "blue-collar" jobs with spells of unemployment. By 1980, no more unskilled workers will be needed than in 1960. Thus, at the same time these untrained young people are coming into oversupply, the jobs that they can do are being eliminated by automation.

In agriculture a startling fact is that by 1980, as many as 15 to 20 percent fewer farmers (both operators and hired laborers) will be needed than in 1960. Since agriculture is involved in many of the professional and technical occupations, young men interested in this field will find many new opportunities in agriculture-related occupations.

Specifially such occupations include landscape architect, agricultural loan specialist, agricultural communicator, conservationist, soil bacteriologist, and farm management specialist. There's also an increasing demand for men broadly, yet specifically, trained in the area of crop protection—weed control, insect control, plant disease control, and pesticide analysis and chemistry.

Agricultural career areas with the strongest demands at the present time are food science, agricultural education and extension, and agricultural industry sales and management. Of these the demand for graduates seeking sales and management positions with business and industry is especially high. In fact, about one-third of the opportunities open this year in agriculture are in this area of opportunity.



"I'm glad you came in. There's something wrong with the air-conditioner."

DRAW THE COWBOY

You May Win a $795.00 Commercial Art Scholarship

Draw in pencil, any size you want (except a size that would look like tracing). If your drawing is chosen contest winner, you'll get a complete $795.00 home study course in advertising art, illustrating, cartooning, or painting. You'll be taught by one of America's leading home study art schools. Every qualified entrant gets a free professional estimate of his talent. Entries for current contest must be received by September 30, 1969. Amateurs only. Our students not eligible. Mail your drawing today. It could be the start of a profitable art career.

MAIL THIS COUPON TO ENTER CONTEST

ART INSTRUCTION SCHOOLS
Studio 9G-3540
500 South Fourth Street
Minneapolis, Minn. 55415

Please enter my drawing in your contest.
(PLEASE PRINT)

Name_____

Occupation_____ Age_____

Address_____ Apt._____

City_____ State_____

County_____ Zip Code_____

Accredited by the Accrediting Commission of the National Home Study Council.
Approved for Veterans Training.

All-season ventilation systems featuring polyethlene air ducts and motorized shutters for livestock and poultry buildings has been announced by the Jamesway Division of the Butler Manufacturing Company. The system controls moisture, temperature, and fresh air flow.

International Harvester's new 56 blower features a 45 degree feeding system that augers the crop in a uniform, near straight-line flow to a 56-inch diameter rotor. IH claims the blower can blow more silage with up to 20 percent less power because of the feed exclusive angle.

David Brown Tractors Ltd. has expanded its line to include this new gasoline model, the 4600. The 4600 has all of the features of the diesel models and has a 46 horsepower PTO. The company also added a 3800, 38 PTO horsepower gasoline model to its line.

This new animal scanner, the model 721 AN/SCAN by Ithaco, Inc. of Ithaca, New York, uses ultrasonic waves to generate an accurate photograph (top) of the interior cross section of a loin eye (below) of a living animal in 20 seconds, requires little training, and can be a valuable hog evaluation tool.

Something New

A new hydraulically operated endgate for 130-, 163-, and 205-bushel single-beater New Holland spreaders improves the ability of handling sloppy manure without reducing their capacity for solid manure. The endgate is made of corrosion-resistant, high-strength steel and lifts clear of heaped loads.

This new brush cotton harvester from Case features a unique double-plenum fan system which separates the cotton from green bolls and takes the cotton directly from the side auger, without cross augers or elevators, to the 2,000 pound capacity basket. The model 500 has a dumping clearance of 11 feet.

Engine Oil Selection

The long and short of oils is not in the visual characteristics, it's in the job the oil has to do. These categories as well as the purposes of oil additives and special dopes are all discussed.

By Melvin Long

SUCH obvious indicators as color, feel, or odor are worthless in judging oil quality or condition. And such terms as premium, heavy duty, detergent, and multiple viscosity only increase the confusion. The engine-oil properties and the terms used to describe them are discussed here so that you can choose the best oil to meet the operating requirements of your engine.

The most noticeable characteristic of an oil is its thickness or viscosity. The SAE number for different weights of oil is based on its viscosity. The full range of these numbers is: 5W, 10W, 20W, 20, 30, 40, and 50. This viscosity is determined by measuring the number of seconds required for a certain amount of oil to pour through a small hole. The SAE numbers with the "W" attached indicate that the oil was measured at 0 degrees F., and the numbers without the "W", at 20 degrees below 0 degrees F.

The "W" oils are intended for cold-weather use while the regular oils are for hot-weather use. Multiple viscosity oils, such as SAE 5W20 or 10W40 have the low-temperature characteristic of 5W or 10W, but act like 20 or 40 when the engine reaches operating temperature.

There are several properties of oils by which they may be classified. The terms "regular", "premium", and "supplement 1" are out-moded designations for attempts to describe other oil properties besides viscosity. The most logical way of describing an oil is to indicate the type of job for which it is best suited to perform.

To provide a uniform system of describing oils, the American Petroleum Institute has set up API standards. These are divided into two categories—spark ignition (M) and diesel (D).

1. *"For Service ML"*—for spark-ignition engines in light and favorable service. Examples: light trucks, some tractors, and power units.

2. *"For Service MM"*—for controlling deposits or bearing corrosion when crankshaft temperatures are high. Examples: farm tractors, trucks, automobiles, engines on balers, combines, and forage harvesters.

3. *"For Service MS"*—for controlling deposits or bearing corrosion because of operating conditions, fuel, or engine-design characteristics. Examples: commercial or farm trucks making long trips or hauling heavy loads, autos used for start and stop driving at low-engine temperature, tractors doing winter chore work.

4. *"For Service DG"*—for diesel engines with no severe requirements. Examples: some farm wheel and crawler tractors, trenching machines, and stationary machines.

5. *"For Service DM"*—for moderately high operating temperatures and loading. Examples: some farm wheel and crawler tractors.

6. *"For Service DS"*—for high operating temperature or severe loading. Used in engines using fuels or having design characteristics that tend to produce deposits or abnormal wear, or if conditions of service are so severe that DG class oils will not serve adequately.

It is possible for manufacturers to classify their oil as suitable for more than one service condition, for example: "for service DG and MS". That means that in this particular case, the oil would be suitable for less severe conditions in diesel engines, as well as most severe conditions in gasoline engines.

All automobile manufacturers now specify the use of service MS oils only. But, the extremely high performance requirements of current automobile engines have made it necessary to set up additional standards and test methods to determine how well a specific oil will perform in each manufacturer's engines.

Essentially, these tests consist of a sequence of five performance tests using agreed upon engines operated under controlled conditions. These tests measure low-temperature oxidation, cam and tappet wear, and sludging properties of the oil.

The engine manufacturer specifies the minimum score that an oil must obtain on each of the five parts of the test in order to be approved for use in his automobile engine.

The oil companies then test their products to determine if they meet or exceed the requirements. The information that a specific oil does meet or exceed the requirements is printed on the oil-container label.

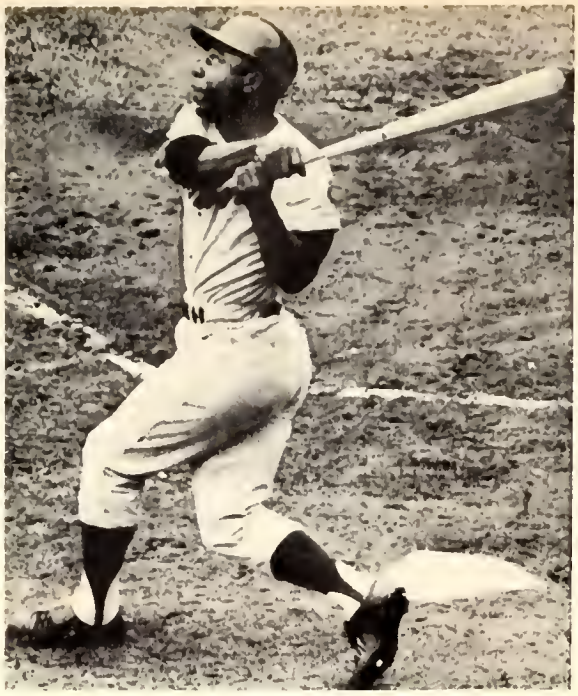
Oil Additives

Engine oil performs several jobs. It reduces friction and wear, absorbs shocks, cushions loads, helps seal the pistons, clean, carries away heat from some parts of the engine, and helps keep the engine clean and free of contaminants.

To perform all these jobs, engine oil contains many additives in addition to the base petroleum stock. These additives include: Oxidation and corrosion inhibitors, detergents, dispersants, anti-foamants, pour-point depressants, and viscosity-index improvers.

The number and amount of additives used depends upon the characteristics of the base petroleum stock as well as the use for which the oil is intended.

(Continued on Page 31)



Hank Aaron, Atlanta Braves' right fielder

SPORTRAIT

Stan Allen

"HAMMERIN" Hank Aaron, 35-year-old veteran of 15 years in pro ball, is one of the most feared hitters in the National League. He has hit over the .300 mark in 12 of those years, but still, some baseball experts will not accord him superstar status.

Hank has been a good athlete since his early days in Mobile, Alabama, where he played baseball and football for Central High School. He decided to stick with baseball since he weighed only 145 pounds at the time. This paid off early as he was offered a contract by the Indianapolis Clowns of the Negro American League after he graduated from school.

Milwaukee Braves' scouts spotted Hank after he had compiled a .467 batting average in just 15 games with the Clowns. The Braves purchased his contract and assigned him to their Class "C", Eau Claire, Wisconsin, team in the Northern League.

Aaron got off to a good start with Eau Claire when he hit at a .336 pace with 116 hits in 345 tries with nine home runs and 51 RBI's. That record bought him a ticket to Jacksonville, Florida, in 1953 to play with the Braves' Class "A" club in the Sally League. Hank went to bat 574 times in 137 games and hit safely 208 times (a league high); and also led league with a .362 batting average, in RBI's (115), runs scored (115), assists, put-outs, and won the South Atlantic League's Most Valuable Player award.

Hank also led the Sally League in errors by a second baseman in 1953 and was switched to the outfield at the Braves' 1954 training camp. This put him in a good spot when Bobby Thomson, their regular outfielder, broke his leg. Aaron replaced him and has been a regular outfielder since then.

Hank had a good start in his rookie season, hitting a .280 pace with 13 homers and 69 RBI's. He continued to improve in his sophomore year when he went to bat 602 times in 153 games, getting 189 hits for a fine .314 average. He also had 27 homers and drove in 106 runs. Hank joined the 200 hit club in 1956 and led the National League in hitting with a .328 average.

1957 was a big year for both the Braves and Hank Aaron, as his play that year played a big part in Milwaukee winning the National League pennant. Hank had 198 hits in 615 tries for a .322 average, and he slammed a league-leading 44 homers. He also led the league in RBI's with 132 and scored 109 runs himself.

Hank tied a World Series mark when he hit safely in all seven games and got 11 hits in 28 attempts for a .393 average. He also hit three homers, drove in seven runs, and scored five runs. His play won him the 1957 National League Most Valuable Player award.

Hank almost repeated his hitting record in 1958, when he had 196 hits in 601 times at bat for a .326 average. And, although his homer output dropped to 30, he did bat in 95 runs. He helped the Braves win another NL flag and hit nine for 27 and a .333 average in the 1958 World Series.

Aaron won his second batting crown in 1959 with a .355 average as his 39 homers helped him drive in 123 runs. His average dropped to .292 in 1960, but his 126 RBI's led the league and he hit 40 homers. In the next five years (1960-1965) his average ranged from .318 to .328. He led the NL in homers again in 1963 with 44 and in RBI's with 130.

The Braves moved to Atlanta, Georgia in1966, but that didn't hurt Hank's hitting much as he led the league in homers again with 44 and in RBI's with 127. It has been a coincidence that he led the NL in homers three times and always with 44 homers.

Hank's bat has been his biggest asset, as he holds or has tied many Major and National League records, however, he has also been a fine defensive player. He won the Gold Glove award as the NL's outstanding right fielder in 1958, 1959, and 1960. He has good speed for a six foot, 180 pounder, and covers a lot of ground in the outfield with ease. That speed has helped him swipe 215 bases, too and just last year he added 28 stolen bases to his credit.

Going into the 1969 season, Hank Aaron had stepped up to the plate 8,889 times in 2,279 ball games with 2,792 hits for a fine lifetime batting average of .314. His hits have been good for 4,982 total bases to earn him the ninth spot in the Major League record book. Of his hits, 484 were doubles and 88 were triples. He has driven in a total of 1,627 runs, and scored 1,603 runs.

Hank is off to another good start this year as he is hitting .338 in 64 games. He has already hit 21 homers which ups his total to 531 to put him in the third spot on the all-time home run list behind Willie Mays. Since Hank is younger than Mays, he should have a chance to take over second place before he "hangs up" his cletes.

"I admit I don't know much about farming, but isn't this a little early for harvesting?"

Engine Oil Selection

(Continued from Page 29)

Oxidation inhibitors reduce the rate of oxidation, and thus slow the formation of compounds harmful to the engine.

Corrosion inhibitors coat metal wearing surfaces with an impervious film to reduce attacks by corrosive compounds.

Detergents loosen deposits which may have formed on valves, pistons, rings, or other parts of the engine.

Dispersants hold the contaminants in suspension so that they will not settle out and collect in the engine.

Anti-foamants prevent accumulation of air bubbles in the oil. When oil is agitated rapidly in the presence of air, tiny air bubbles form. The air "dilutes" the oil and reduces its effectiveness. Therefore, it is important that these bubbles be removed rapidly from the oil.

Pour-point depressants improve the ability of the oil to flow at low temperatures.

Should these highly-compounded additive-type oils be used in all engines?

If the engine was built before these additive-type oils were in general use, obviously the engine was not designed to make use of the improved oil properties. Therefore, there is little reason for the use of anything but the straight petroleum oil for which the engine was designed.

In fact, if detergent oil is used in an engine which has had many hours of service with non-detergent oils, it may start to use oil. However, there's a good reason, which is not the fault of the oil.

Generally, the engine was not using oil because it was so full of sludge and other deposits that the oil could not circulate as fast or every place that it should. Thus, the engine was not using oil because it was not being properly lubricated.

When the detergent oil is added, it tends to remove these deposits and permit free circulation of oil. Then, if the engine is worn, it will start using oil, as it should have been doing all along.

An oil containing detergent and dispersant usually appears dirty soon after it is put in the crankcase. This appearance is produced by the contaminants that it carries in suspension. The dirty appearance is an indication that the oil is doing its job properly.

Many tractor manuals recommend changing crankcase oil every 100 hours of operation, with a decrease of operating period as the service becomes more severe. Operation that is mostly short haul running, with a cold engine, may require an oil change every 50 hours for best engine protection.

In a cold engine, the incomplete combustion produces impurities that dilute the oil and decrease its effectiveness. They reduce its ability to lubricate and to clean the engine, as well as forming acids and deposits which promote wear.

Special Dopes

What about the special additives or dopes that can be added to the crankcase oil or to the gasoline? Some of these can be used without risk, and do provide benefits. For example: engine solvents for freeing gum-stuck piston rings, upper cylinder lubricant for regular use and for breaking a new or rebuilt engine, and de-icer concentrates.

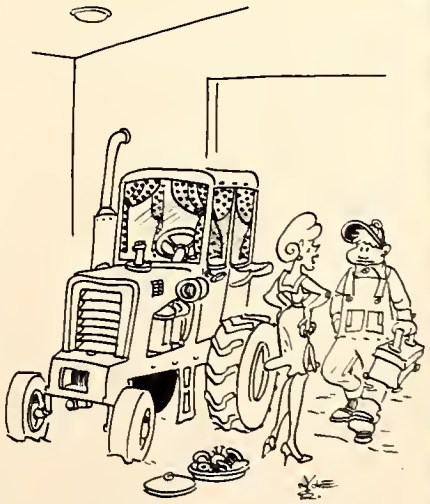
Any other special compounds or "dopes" however, are likely to do more harm than good. The various additives discussed earlier in the article are added to the base stock on the basis of exhaustive tests and evaluations conducted by the refiner. The problem is to obtain the desired in each case without introducing undesirable characteristics. Thus, a careful balance must be maintained among the several additives used.

When you proceed to add your own "dope," the ultimate result is not that which is hoped for by the seller of the compound.

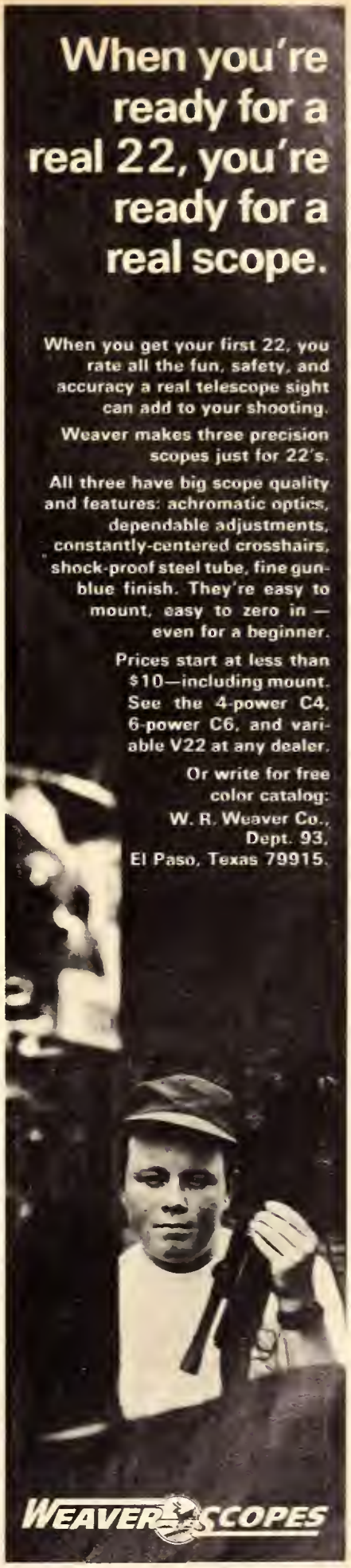
How Often to Change

Your tractor operator's manual contains specific instructions on how often to change the crankcase oil. It most cases, it will also recommend the API classification that you should use.

Any attempt to "stretch" oil service life for a few more hours is usually poor economy. One engine overhaul that could have been avoided will buy a lot of engine oil.



"I've been doing a little interior decorating on your tractor cab."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Hazardous Occupations Order In Off-Farm Agriculture

MANY of you, as vocational agricultural students, seek occupational training in agribusiness. However, according to the hazardous occupations order for agricultural occupations, the definition of agriculture does not include employment in off-farm agriculture. Another set of orders, as you may recall from "The Hazardous Occupations Order Affects You" article in the last issue, covers jobs in these off-farm agricultural businesses.

Off-Farm Agriculture

Students and teachers who are seeking to develop supervised occupational experience programs with employers who operate agricultural businesses are required to follow the child labor provisions of the Fair Labor Standards Act as amended in 1966. A provision in this law states: "At 16 years of age young people may be employed in any occupation other than those in non-agricultural occupations which have been declared hazardous by the Secretary of Labor. There are no other restrictions. If it is not contrary to state or local law, students of this age may be employed during school hours or off school hours."

Exemptions to the non-agricultural hazardous occupation orders 5, 8, 12, 14, 16, and 17 are available to apprentices and student learners. Few, if any, of the occupations in which vocational agriculture students would wish to work are apprenticeable trades. In as much, student learners will be required to meet the same provisions as students employed in hazardous occupations in agriculture.

There are no provisions for exemption of students under the age of 16 to work in non-agricultural occupations which have been declared hazardous. The exemption privileges for student learners to work in non-agricultural occupations which have been declared to be hazardous are for students between 16 and 18 years of age. Special note should be taken that the exemption privileges afforded student learners in non-agricultural occupations do not extend to all the 17 hazardous occupations, but only to those specified.

Orders number two and seven have special significance for off-farm occupations. A student employed in a feed mixing plant, for example, would quite likely find it desirable to drive a delivery truck, or to serve as a helper on a truck in delivering bulkfeed.

Order number two has been relaxed to make it possible for a student learner to serve as a helper when he rides inside the cab of a truck to and from the farm or feed mixing plant. The student may also serve as driver of vehicles under 6,000 pounds gross weight during daytime only. To do this the student must hold a valid state driver's license and have completed a state approved driver education course. The vehicle must be equipped with seat belts and the employer must have instructed the student that the seat belts must be used.

Order number seven has been relaxed to make it possible for a student learner to operate fully automatic passenger or freight elevators when they are controlled entirely by push buttons.

Students meeting all provisions may be employed in retail or service establishments or in agriculture at a wage rate not less than 85 percent of the established minimum. In order to fulfill these requirements, a certificate must be issued in accordance with the regulations.

If you have any further questions concerning the hazardous occupation orders which pertain to your occupational experience program, ask your vocational agricultural instructor. He may be able to help you comply with the conditions in your own state. For more information regarding the hazardous occupation orders for agriculture, the amendments, and the child labor laws, you or your vo-ag teacher may contact your local U.S. Department of Labor, or your county extension office.

Hazardous Occupation Orders in NON-AGRICULTURAL Occupations Affecting the Employment of 16 and 17-Year Olds

1. Occupations in or about plants or establishments manufacturing or storing explosives or articles containing explosive components.
2. Occupations of motor vehicle driver and helper.
3. Coal-mine occupations.
4. Logging occupations and occupations in the operation of any sawmill, lath mill, single mill, or cooperage-stock mill.
5. Occupations involved in the operation of power-driven woodworking machines. *
6. Occupations involving exposure to radioactive substances and to ionizing radiations.
7. Occupations involved in the operation of elevators and other power-driven hoisting apparatus.
8. Occupations involved in the operation of power-driven metal forming, punching, and shearing machines. *
9. Occupations in connection with mining, other than coal.
10. Occupations in or about slaughtering and meat-packing establishments and rendering plants. *
11. Occupations involved in the operation of certain power-driven baker machines.
12. Occupations involved in the operation of certain power-driven paper products machines. *
13. Occupations involved in the manufacture of brick, tile, and kindred products.
14. Occupations involved in the operation of circular saws, band saws, and guillotine shears. *
15. Occupations involved in wrecking, demolition, and ship-breaking operations.
16. Occupations involved in roofing operations. *
17. Occupations in excavation operations. *

*Exemptions are available for apprentices and student learners.

The Duck Who Came to Stay

James G. Mortimer

Old Quacker, a well-known duck of western Montana, lives at Troy mill pond.

OLD Quacker is not a mallard; not a widgeon; not a pintail; nor any of the other well-known species. He is non-descript. He may even be a cross between a wild and a tame duck. He has a mottled mixture of light and dark feathers with the light colors predominating. He is somewhat larger than a mallard, but smaller than a tame duck.

Old Quacker made his first appearance in March of 1953, in the little town of Troy, Montana, and in February of 1969, was still active and alert. According to authorities, the life span of a wild duck is 10 to 12 years, but Old Quacker was full grown upon arrival, and has now survived 16 additional years.

At any rate, Old Quacker is a freak, not only in looks, but in habits as well. In the fall when the other ducks are migrating, he remains disinterested. He steadfastly sticks to the pond of floating logs and the din of busy cranes, clanking chains, and humming saws.

You see, he is community property. He belongs to everyone. He may be somewhat reserved or perhaps suspicious toward strangers, but to proven friends he is unafraid and will eat from an outstretched hand.

During the summer months there are myriads of insects on the floating logs. He cruizes up and down the lane between logs, like a tug boat in a busy harbor, industriously shoveling in bugs of all kinds. At other times of the year, if there is a shortage of bugs or for a change of diet, Old Quacker knows he can bum a handout. Any pondman, millman, or truck driver will share his lunch. In fact, one truck driver was observed feeding most of his lunch to the duck. No doubt, it is routine for housewives to add extra slices of bread to lunch pails.

Then, too, there is the grain barrell in the pond house, supplied and reserved for his use only. The pondmen never allow it to become empty. On their own time they sweep out the empty grain cars on the nearby track siding. When that source fails, everyone digs up some cash to purchase grain.

Through the years Old Quacker has seen vast changes take place, but he remains unperturbed. In 1955, a new sawmill and steam plant was started as well as a much larger pond. Construction and upheavel was everyplace. Huge new buildings were shaping up all around the duck, and soon the small pond would be filled in. What would Old Quacker do? Would he migrate that fall, never to return? Not Old Quacker. He had a very simple solution.

With a mighty beat of the wings he arose majestically above all the turmoil of cranes and scaffolding; set his wings and glided only as far as the nearby Kootenai River. There he stayed for the winter. Occasionally he would waddle to the top of the river bank to check up on the progress of his new home. His faithful providers made daily trips with sandwiches and box car gleanings. Fortunately, it was a mild winter, and the river remained open.

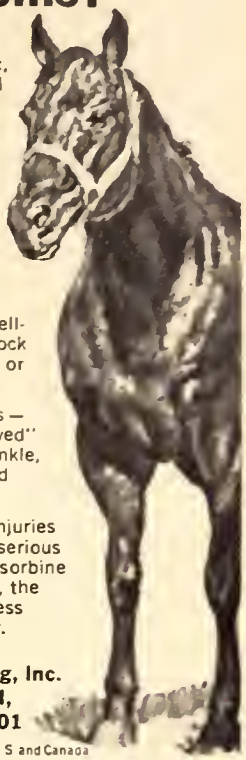
At last the new immense log pond was completed. The water was turned on, and with it came Old Quacker, thankful to be home once more.

He enjoys hot and cold running water. To keep the log pond from freezing over, a huge flow of hot water is discharged from the steam plant into the pond. Between this hot water inlet and the cold water inlet there is any temperature to suit the desires of Old Quacker.

When winter temperatures are low, he stays mighty close to the hot end of the pond. Every two or three days, or

(Continued on Page 35)

Does your horse have these symptoms?



1. Stiff-gaited walk, or refusal to stand on all four legs are general symptoms of lameness. Check horse over carefully.
2. Swelling and heat on front of foreleg from knee to ankle. It's called "bucked shins."
3. Soft, painless swelling around the fetlock is called "windgall" or "windpuff."
4. Swollen tendons — swelling gives a "bowed" look from knee to ankle, so it's called "bowed tendon."

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FFA, an opportunity for *you*

By Ron Scherer

I GUESS I first wanted to be a veterinarian. Then, the Russians launched their first Sputnik and my ambitions quickly turned to space science and physics. A neighbor boy and I even built and launched our own rockets—until we decided playing basketball was safer. And, with my high school physics and chemistry grades being what they were, it didn't take long for me to renew my interest in agriculture.

By the end of my freshman year, I was positive I should be a county extension agent. Well, almost positive—besides, an agriculture teacher is sorta' like a county agent, and with my growing interest in FFA and all, I was soon sure that teaching agriculture was "my bag".

By the time I was a junior—and a dozen careers later—I was ready to chuck it all and return to that southeastern Illinois farm after high school graduation.

But then something happened which changed all this. That little "something" has influenced nearly every decision I've made since then. It's the major reason I'm seated behind a desk today writing this article instead of plowing the back forty.

Anyway, that "something" is the sum of all the experiences I gained as a sectional FFA reporter. As a sectional reporter, I was responsible for publishing a sectional newsletter and publicizing the activities of the 15 chapters in our section, in any way, shape, or form I saw fit. I used newsletters, magazines, newspapers, radio, exhibits, and word-of-mouth to spread the FFA's message to the public.

All this time I kept getting letters from the University of Illinois telling me that, as an FFA reporter I was involved in something called agricultural communications. Why, I didn't even know there was such an animal as agricultural communications before I became a sectional reporter.

But, as my year as an FFA reporter progressed, I learned more and more about communications and became more and more interested in it. The whole thing was not only a challenge, but was also starting to turn to fun. And an instructor once told me, "When a job turns into fun, man, you had better take it."

Because of my experience as a sectional reporter, I realized there might be a place for me in agricultural communications. Since that term as FFA reporter, I have received a B.S. degree in agricultural communications from the University of Illinois, and am, I hope, on my ways towards a career in that area.

I'm not trying to do a commercial for agricultural communications. I'm also not saying there's a career for you in agricultural communications. I am saying, though, that there are opportunities for you in the FFA which can influence you throughout life.

During the time while you are going through high school, what may appear to be only minor everyday happenings, are probably actually learning experiences. You are learning by doing the things which will help you grow personally. And you will continuously improve yourself even more—**if** you recognize the experiences you obtain from FFA opportunities and take advantage of them.

I've cited one example of how the FFA proved to be an opportunity—but there are many others. I can think of at least three young men who are now pursuing careers in law, with the long-range plan of eventually becoming involved in politics and government.

These three were each state FFA officers several years ago. And, like me, their experiences in the FFA, especially those gained while leading the FFA as officers, played an important part in deciding what career to seek. Through the FFA, they learned about leadership, parliamentary procedure, citizenship, and patriotism—the things that stirred their interest in politics and government.

The experience of another fellow FFA member sticks in my mind. This young man is now actively engaged in farming. Why is he farming?

He gives, as the major reason, the experiences he gained through his supervised farming program in the FFA during high school. Through the FFA, he had the opportunity to control his own enterprises, to make them grow, and to a great extent, determine their success or failure. The FFA provided him with an opportunity and he accepted it.

A friend of mine and former staff member of the University of Illinois is working on an Agency for International Development (AID) assignment in Malawi, Southeast Africa. He wrote, "When I started my first AID job, I thought all problems could be solved by educating the people. After working on three overseas assignments, I'll have to admit my thinking has changed. Education is vital, but alone will do very little to help a developing country. I believe the same is true for a young man or woman in the USA. There are other aspects such as motivation, resources, luck, and the most important, **experience**!"

What are the opportunities for youth through the FFA?

They are primarily two-fold. First, the FFA offers you an opportunity for personal growth and development, and second, an opportunity to serve others through a better community, better government, and a better agriculture.

What about the opportunities for personal growth and development? We fail to recognize many of the everyday FFA experiences as opportunity-yielding ones. The experiences you gain from conducting a meeting, or making decisions by means of ballot, learning to speak in public, meeting people and making new friends, learning to solve your own problems, buying and selling cooperatively, financing yourself, assuming civic responsibility—all are valuable experiences. These experiences all add up to **opportunity** for you. Take advantage of them, and recognize them as a means of opportunity.

But what about the other side of the two-fold opportunity scale—the opportunity to serve others?

The FFA has long been known as an organization working for community service and improvement. But these efforts by the FFA are no more than the sum of all the efforts of each individual FFA member. What you are and how you cooperate with other FFA'ers determines to what extent your chapter is a service to others.

The opportunity for personal growth and the opportunity for service to others complement and stimulate each other. They can both arise from experiences gained from FFA—**if** you recognize these experiences as opportunities.

As members of the FFA, you have learning experiences that most other youth do not have. View these everyday experiences as opportunities for growth. Prove to yourself, first-hand, that the FFA **is** an opportunity for you. I did!

The Duck Who Came to Stay

(Continued from Page 33)

whenever hunger drives him to it, he hits for the pond house; gluts himself on grain and rapidly propels himself back to warmer water.

After several seasons it was discovered that the resident duck was nesting in a hollow log. During conversations a listener could still note that Old Quacker, even though a female, was still called a "he" and such is the case to this day. Thinking of Old Quacker as a male was too deeply ingrained in the minds of millmen to be changed now.

Old Quacker laid 17 eggs and dutifully sat on them for more than the prescribed time of incubation. Meanwhile, the cedar log had been secured to a boom so that it didn't get run through the sawmill. Pondmen made sure that the nesting duck was not disturbed. Eventually Old Quacker gave up the nest and resorted to his normal pond life. The eggs were not fertile.

Early the following year a plan was formulated to aid Old Quaker in his efforts to raise a family. One of the millmen had a flock of domestic ducks. He trudged into the mill yard one morning with a white drake under his arm.

They had reckoned without the cooperation of Old Quacker. He was most indifferent and suspicious of this intruder. The drake was left in the pond for some time, but nevertheless, Old Quacker once more went to the nest and sat on sterile eggs. This was Old Quacker's last attempt to be a mother.

In all of "duckdom" Old Quacker is probably envied for his easy and luxurious living. Even so, time is leaving its marks. Old Quacker no longer takes to wing. His last effort was a miserable failure. He managed to get air-borne, as he headed for the river, but he couldn't gain enough altitude to clear the dike and crashed with a thud.

He also limps badly as he traverses the booms and logs in quest of insects. When a whole truckload of logs is dumped into the pond at one time, huge waves fan out in all directions, and logs bump and grind together many feet away. On one occasion, Old Quacker didn't dodge soon enough and one leg was painfully mangled and broken between the heaving logs.

Somehow, he hobbled over the dike and down to the riverbank. That most likely would have been the end for Old Quacker, but fate stepped in to save him. A young boy found the sick duck, gathered him up, and dashed for home.

The boy's mother dropped all routine household chores and duties. Old Quacker's leg was cleaned up and splints applied. A box was fixed for him, and he was fed.

When he was considered cured he speedily resumed his duties as pond mascot and bug exterminator. Old Quacker continues to remember the dangers of his hazardous occupation and watches log movements closely. He will not be caught a second time.

Except for his one accident he has never been late, and never, never been absent. He is as dependable as the seasons. One man even remarked, "Why Old Quacker will get a bigger pension than I do. He's got a lot more seniority."

You may be sure that Old Quacker will not voluntarily retire. He will remain a faithful and loyal employee to the very end. And when his final exit does come, there will be no laughter, and more than one tear will be brushed away with a work roughened hand at the Troy mill pond.

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THE FFA IN ACTION

CALIFORNIA—The Livingston FFA Chapter forms a team to carry out their annual community implement show. The implement show, one of the biggest of its kind in California, was conceived by the Livingston FFA as an educational and community service project three years ago.

At first, the plan was simply to get agricultural machinery and equipment dealers to bring their "wares" to the school grounds, and in one day have their equipment on review for the public.

Starting with the original idea of an implement display, the chapter added a tractor rodeo, an "idea" show, a farm, and a free bean feed. Every member of the chapter becomes involved in such committees as publicity, "idea" show, the farm, exhibitor relations, physical set-up, concessions, and tractor rodeo. A Saturday late in March is selected as the day for the show.

The Esau brother's grape harvestor won the top prize in the FFA "idea" show.

Livingston is a small town in California's San Joaquin Valley. The farming in the area is highly diversified and consequently brings in a wide range of farm equipment to the high school athletic grounds. It also brings in thousands of people to view and take part in the activities. Last year over 300 pounds of beans were baked for the free luncheon.

One of the most popular events of the day is the "idea" show. This is open to anyone who has something new to offer in the way of ideas for farm equipment. The very first year three members of the Livingston Chapter won the idea show with a grape picker they had devised in their farm shop. Another favorite among the people who watch is the tractor rodeo. There is always plenty of action in this event.

Robert Olson and Pirus Abraham are advisors of the Livingston Chapter.

ARKANSAS—The state association held its forty-second annual convention at their state camp—Camp Couchdale near Hot Springs. Over 300 members and advisors "roughed" it in the well equipped cabins, and dining hall.

The sessions are held in the chapter house—a large meeting hall with stage. A fireplace in one end is all that remains of an original camp building. It is a fireplace built with stones given by various local Arkansas chapters.

National Advisor H. N. Hunsicker, spoke at the opening session of the convention. Another guest speaker was Mr. E. D. Beall, first Arkansas state FFA president. Lowell Catlett, national FFA vice president challenged the delegates to action in the organization.

Committee members review points to note when checking fire extinguishers.

ILLINOIS—The Mt. Carmel FFA Chapter has started a cooperative store to help members obtain official FFA material such as T-shirts, notebooks, and ballpoint pens. And to see how a cooperative works. Any member of the FFA chapter is also a member of the cooperative. The cooperative accomplishes many purposes. It encourages students to buy more FFA material, it lets them purchase the material at a reduced rate, and it lets the students run a cooperative by themselves.

The store started with a $100 loan from the FFA chapter. This money was used to purchase an inventory of material from the Future Farmers Supply Service in Alexandria, Virginia.

The store's fiscal year started April 1, 1968, and ended April 1, 1969. At the end of the fiscal year it was anticipated that the co-op store's board of directors will declare a 10% dividend based on the number of dollars' worth of business a member has purchased during the year.

The board of directors consists of five members. The members are: freshman, Steve Koenig; sophomore, Eddie Trapp; junior, Jerry Tennis; senior, Jack Smith; and the treasurer of the chapter, David Peach who acts as chairman of the board. *(Mark Ankenbrandt, Reporter)*

NEW YORK—There's an FFA chapter in New York City. It is at John Bowne High School in Queens. There are 150 "aggies" who have enrolled in the agriculture course plan. This includes sophomores, juniors and seniors. There are 4,000 other non-ag students in the high school.

Ag students take all of the regular academic subjects of a high school plus two periods of agriculture. The school is located near Laguardia Airport. Chairman of the agriculture department is Mr. George Chrein. Other vocational agricultural instructors are Mr. Robert Klastorin and Mr. William Niederoda. The ag department includes a classroom, shop, and 4.5-acre land area behind the school. This land laboratory is used for testing soil, raising vegetables, fruit trees, and chickens.

In addition to classroom studies, these FFA members spend their summers during high school on a farm. Students for the ag department are selected by application. *(Marc Greenberg)*

LOUISIANA—Members of the Saline FFA Chapter are active in promoting and helping with school safety. Safety committee members meet with high school principal and other school officials to discuss all phases of school safety and how FFA members can help.

Approval for carrying out safety activities is secured from the principal. A report by the safety committee is given at the next regular chapter meeting and plans are set for getting started.

Chapter members also select a fire warden and three assistant wardens. The president appoints several committees including fire hazards, fire extinguishing equipment, fire drill, traffic safety, and playground equipment. These committees are responsible for the safety program at school and they get 100 percent cooperation from the other members. *(Bo Weaver, Reporter)*

OHIO—The Triway FFA Chapter sponsors its own exchange student program. This exchange has been going on for several years between Wayne County where Triway is located and Cuyahoga County.

This year David Chrencik, from Cuyahoga Heights (a Cleveland suburb) came to stay on the farm of James Baker. James is a junior at Triway and will go to Cuyahoga Heights for a week next year.

Dave is a senior, a member of the school choir, drama club, and is on the varsity golf club. He plans to major in mathematics in college.

The main purpose of the exchange program is to give a city or urban student (preferably a junior or senior) a chance to stay with a farm family and attend school for a week. He will be asked to help with chores and participate in family activities.

A student from Triway High School in Wooster is given the opportunity to live with the city family in the spring.

An urban exchange student gets a look at a dairy operation from the work end.

The program is coordinated through the county superintendent's office. The schools are about the same size in number of students. *(Richard Mills, Advisor)*

SOUTH DAKOTA—Honorary Chapter Farmers of the Watertown FFA presented the "Most Active Member" award at the chapter's banquet.

This award was conceived by the men who are Honorary Chapter Farmers because they want to continue their support and help to the FFA. The chapter invites these men to the annual banquet.

The "Most Active Member" award is determined by a point system. Points are given for attendance at meetings, assistance at money making activities, dues paid by specified date, major committee work, FFA trips outside of class time, and owning his own FFA jacket.

The award includes a trophy for the winner and is presented at the banquet. A chart showing the points of each member is posted in the vo-ag classroom. These points are posted by the advisor or officers. Any member can see how he ranks with other members.

Kenneth Kittleson is the most recent award winner with 238 points. His attendance was perfect, both for meetings and all major fund raising activities. He was elected chapter president for next year. *(Clarence Hall, Advisor)*

TEXAS—The Brownwood Chapter held its Second Annual Rodeo this spring and entertained over 1,800 people.

The first day's activities were for the local schools. The main attraction was the faculty goat milking contest. Faculty members from the senior high, junior high, and elementary schools were invited to compete in this event. The object is to see who can race to one end of the arena where the goats are tied and get milk in a bottle. Then back to the starting line.

All the surrounding chapters were invited to the second day of the rodeo. Twenty-five nearby chapters competed.

Also a parade and queen contest were held the second day. Monica Dos Santos, exchange student from Brazil, was elected queen. *(Mike Davis, Reporter)*

The annual FFA rodeo is fun, but it's also plenty of hard work for everyone.

MINNESOTA—Twenty-one FFA'ers from Forest Lake walked over 30 miles to the St. Paul campus to the opening session of the Minnesota FFA Convention. Each of the participants in the "Walk for Development" was sponsored by Forest Lake businessmen. Over $400 was raised that will be used to purchase seed and livestock for devloping countries. High School Chapter Advisor Lee Sandager, will personally see that the FFA'ers' contribution will be put into good use as he will spend two years on an agricultural development program in Africa.

Advisor Sandager started the project by agreeing to sponsor the chapter president $1.00 per mile. Three groups of supporters and participants developed. Group A was labeled "ambitious" since they started at Forest Lake and walked the entire trip. Group B was labeled "better late than never." They started from Hugo—9 miles and 2 hours later. Group C was "careful with the feet but generous with the money."

These FFA members pledged their feet or money toward stamping out hunger.

Photo by Minneapolis Star

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Ways

A worn-out phrase to describe the efforts of getting operating funds. Here are some helpful ideas.

EVERYONE knows it takes money to do things nowadays. It takes money to operate an active, enthusiastic FFA chapter, too!

Fund raising activities of local chapters are a significant part of the year's program. Most chapters like to find a successful fund-raiser that all members can help with and enjoy, plus one that works.

Here are some ideas that have been put to the test by local FFA Chapters.

The Gervais, Oregon, FFA Chapter catches 10,000 chickens an evening for three evenings and adds $210 to their chapter treasury. Members catch and load broilers onto trucks for trip to slaughter.

In Iowa, the Griswold FFA has been plowing and discing gardens to make money for the last two years. Members work after school and on Saturday; they provide the equipment. They set a price according to size and how difficult the garden is to plow. The project is not a real big money-maker, but it doubles as a community service.

Mickey Thomas, reporter of the Winnfield, Louisiana, Chapter, writes that his chapter sponsors an annual public auction. They sell farm, auto, and sports equipment, plus home and garden supplies. The chapter gets 10 percent of all sales. He also added it takes lots of work by the members and advisor.

Some chapters have several money-making schemes. The Cathlamet, Washington, Chapter harvested 15 cords of firewood from their tree farm. They netted $105 on a fryer project of 150 birds they raised, processed, and sold. And, they sold $50.00 of apple cider.

The Colfax, Washington, FFA sold 1½ tons of walnuts and one-half ton of filberts. Columbia, Washington held a scrap drive and earned $80.00 from 6½ tons. Harrington, Washington sold Christmas trees.

The Evergreen, Washington, FFA really had the projects. They sold chapter-grown Chrysanthemums at $1.00 per plant. Bob Warner won a wristwatch and $31.00 for a high sales of 125 plants. Also, the chapter produced and extracted honey netting $200 and sales of flower bulbs earned $325. Winter sales included scented candles and Christmas wreaths.

Several other Washington chapters conducted pre-holiday turkey drawings. Bellingham-Meridian, Washington, sold $175 worth of poinsettias.

In Missouri, the Salem FFA Chapter has been successful in raising money by sponsoring boxing, eight to ten bouts each night, for three Fridays. Sales of popcorn, soda, and admissions have netted about $690 per year. They've been doing it for 22 years.

Although many chapters sell Christmas trees, Cole Camp, Missouri, FFA snow flocked theirs and took in $1,900.

Many chapters know about the success and fun of a donkey basketball game. Cabot, Arkansas, FFA had one this spring. Wachusett, Massachusetts, made $438 on theirs.

and Means

By Jack Pitzer

Chapter farms bring in plenty of cash for conducting local chapter program.

Another very popular activity is a slave auction—many letters are received at *The National FUTURE FARMER* telling of extremely successful chapter slave auctions.

To stimulate interest in the Helena, Montana, FFA slave sale, they ran a newspaper ad. It listed the slaves i.e.: Lot No. 2—John Murphy, 15-year old freshman, 5'5", 125 lbs., walks, talks, and multiplies one-digit numbers. Lot No. 35—Rem Mannix, advisor, a steal at any price.

Delavan, Minnesota, Chapter is offering rural residents a chance to replace worn out mail box installations. Cyrus, Minnesota is selling mail box markers.

Here's a new one. Buffalo, Minnesota, FFA is sponsoring aerial colored photos of 100 farmsteads in the area. They then sell these pictures.

Foley, Minnesota, held a raffle. Top prize was "Beautena," the FFA calf. Other prizes were calf starter pen, pig cutout, and tool boxes.

In Alabama, Advisor Shellhorse of Arab FFA told me his chapter sold subscriptions to the local newspaper. The individual member made some money, as did the chapter, on each sale.

Some chapters have made plenty by sponsoring rodeos—and had fun, too.

Shiprock, New Mexico expected to sell 288 boxes of candy. Monument Mountain, Massachusetts, FFA sold vegetable seedlings to local gardeners.

Garden seed sales is a very popular project. Ridgeway, Illinois, had a seed sales contest. Ended it with a ham supper —ham furnished by loosing sales team. Griswold, Iowa is selling certified oats.

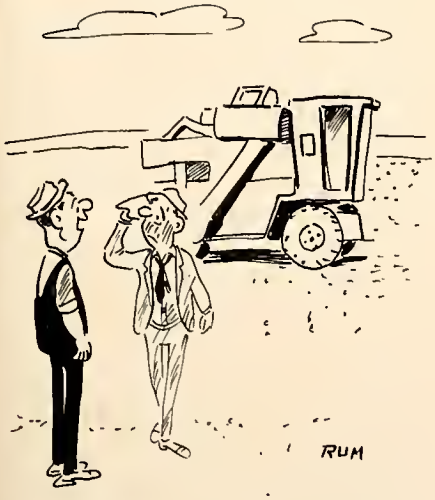
The North Summit, Utah, FFA held a cake baking contest and auctioned off the cakes at their FFA sweetheart dance. The top cake brought $60.00.

Of course, hundreds of chapters have corn or test plots. Menno, South Dakota, FFA decided that would be the best way for them to make extra money and learn something, too. Scotland, South Dakota rented two 10-acre plots in addition to their regular plot.

Prize money can fill a void in a chapter treasury. Miller, South Dakota, won $250 from the Pheasants Unlimited program.

The Official FFA Calendar program includes a provision for chapters to add to their treasury. Chapters get a local sponsor, the chapter gets 25 percent commission. Cassopolis, Michigan, FFA and Mansfield, Arkansas, FFA are just two of the hundreds of participating chapters.

Other sales items include: canvas hog slappers; SMV signs; pizza; pancakes; bar-b-que chicken, beef, or pork; soil testing service (particularly for lawns in urban areas); lawn care service; car wash; umpire services at local ballpark; show boxes; show gates; azaleas; homecoming corsages; pine cones; dried seed pods; and a billion others.



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Members who visit the National Center can learn about the Official Calendar program and how to use it effectively.

A Problem And A Solution

THE local FFA chapter didn't know what to do. The chapter had lots of things going, but there wasn't much outside interest in the FFA chapter.

The chapter had lots of members. Most of them were typical—liked to participate in the judging contests and livestock shows. They had a 25 acre farm near town in corn and soybeans and had built picnic tables for the local park. But, still, it seemed like the same handful of people were the ones interested in their program.

Then, one summer the chapter president attended a meeting and heard about a way the chapter could create public awareness. He came back to one of the summer meetings and told us about using the Official FFA Calendar program. He said he'd heard that these Calendars were real nice looking ones that would give some class to our image.

So, we sent for a Calendar Kit and got some samples of FFA Calendars. They did look pretty good. We appointed a committee to check this program out.

The next meeting they reported. There were three kinds of Calendars and three ways we could participate. We chose the Home and Office style Calendar since it had 12 color pictures and a nice size. We heard that the Weaver Chapter used the Desk Calendars in their school offices and the Poster style in the classrooms or public places. But, we figured we'd better start with one style the first year.

Since we didn't have lots of extra money in our treasury, we decided to use the Plan A part of the Calendar program. This way we could get a local business sponsor to help with the cost (and even make 25% commission for the chapter). Some of the guys wanted to decline this commission and let the sponsor pay a lower cost, but that idea was turned down. We understand, though, that many chapters around do it that way.

The Calendar Committee we appointed was on the ball. And, they had taken the initiative to make up a list of potential sponsors for our chapter. We narrowed it down to two. Well, they didn't even have to go to the second one, 'cause Mr. Gill thought those FFA Calendars were real fine. He ordered 200.

The deal is complete now. We sent in the order to *The National FUTURE FARMER*, P. O. Box 15130, Alexandria, Virginia, right after Mr. Gill signed it. He said he wanted to get his Calendars before Christmas. And we knew that we'd better get the order in early (before school started) so it could be processed and delivered on time. Mr. Gill will not be billed until after the Calendars arrive. We will go help him distribute them to his best customers.

A year later. We really found out that those FFA Calendars we used last year helped. We've had several businessmen give us a hand with our farm. And Mr. Dunn, our advisor, said he thought it helped encourage two boys to take vo-ag.

Some of my fellow FFA members on the Calendar Committee (I decided to go ahead and accept the chairmanship 'cause I think it's a pretty good activity) have been talking about the idea of our chapter having a Plan B order next year. We'd like to give something to those people in our area who have helped us out. Then, Mr. Gill can continue to sponsor Calendars, too. In fact, I just may order a Plan C Poster Calendar myself. That's the way individual members can get Calendars.

If you want to get the facts about this activity for your chapter, send for them at our national FFA magazine.

Although this story is factual, the names are fictitious. It is built upon typical comments we have received from participating chapters.

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Calling the Previous Question

By Dr. Jarrell Gray

HAVE you ever been in an FFA meeting where two or three members insisted upon prolonging debate when it was obvious that they were in the minority? In such a situation, you were probably wishing the chapter would vote on the question so it could continue with further business. By offering the previous question, one may, if it passes, bring to a vote the immediately pending question and on such other pending questions as may be specified in the demand.

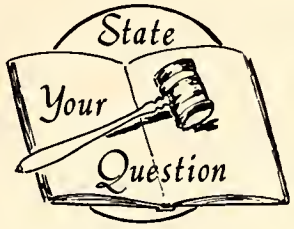
If the previous question is called without qualifications, only the immediately pending question is affected. If it is desired to close debate and vote on all pending questions, then it is necessary to so state.

A two-thirds vote is required to pass the previous question. It is also undebatable, unamendable, and requires a second. The previous question may be reconsidered before any vote has been taken under it.

The proper way for a member to state the motion is, "I move the previous question on (state the motion or motions on which it is desired to be ordered)."

After this motion receives a second, the president may state, "The previous question is moved. This motion is undebatable, unamendable, and requires a two-thirds vote. Those supporting the motion please rise. Those opposed please rise. The vote is (15) for and (4) against. There being a two-thirds majority in favor, the motion carries and the previous question is called. We will now vote on the main motion that . . ."

Sometimes FFA members have the erroneous impression that using the previous question is not fully democratic. The previous question is democratic. The minority group has had an opportunity to express itself. Since the privilege of members is involved, a two-thirds vote is required which is in keeping with the democratic process of parliamentary procedure. By using the previous question, then, a group decision is arrived at, and the business of the FFA chapter is expidited.



Leesburg, Virginia

Q. What determines whether you vote on the previous question? Is it done when a member calls for the previous question or is it when there is more discussion when the president asks for it?

D. A. Jenkins

A. The previous question is used when a member is attempting to stop debate, thereby bringing the motion, or motions, to a vote.

Ezel, Kentucky

Q. When a member moves to appeal from the decision of the chair, should the president ask the vice president to assume the duties of the chair while he states why he made the ruling he did?

Anthony Patrick

A. No. The president should remain in his station. Stating why he made the ruling he did is merely giving information to the group and is not considered as debate or discussion on the ruling.

Do you have a question on parliamentary procedure? If so, you can get a direct reply from Dr. Gray, and your question may be selected for use in this column.

Answers are based upon "Parliamentary Guide for FFA" by Dr. Jarrell D. Gray. For direct replies, send your questions to Parliamentary Procedure, The National FUTURE FARMER, Box 15130, Alexandria, Virginia 22309. Enclose a self-addressed, stamped envelope.

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HAVE YOU HEARD THIS ONE

"Man overboard," shouted the seaman.

Whistles shrilled, bells clanged, and people shouted. At last the liner came to a stop.

The seaman rushed to the captain and saluted. *"Sorry, sir,"* he gasped, *"I've made a mistake."*

"Thank goodness for that!" said the captain and he ordered full speed ahead.

"Yes, sir," said the seaman, *"It was a woman."*

Thomas LaNance
Auburn, California

Jim: *"Did you have any luck on your hunting trip?"*

Joe: *"I'll say I did. I shot 17 geese."*

Jim: *"Were they wild?"*

Joe: *"No, but the lady who owned them was."*

Tommy Hopson
Afton, Tennessee

A man reading birth statistics in a public library turned to his friend after some quick calculations and stated, *"Every time I breathe, someone dies."*

His friend replied, *"Would you mind breathing in the other direction."*

Ronnie Harper
Danburg, Georgia

Fred: *"My uncle has the laziest rooster in the world."*

Bill: *"How can you tell?"*

Fred: *"Well, he never crows at sunrise. He just waits until some other rooster does the crowing, and then he just nods his head."*

Janelle Olson
Springer, New Mexico

The Bible school students were telling why they came.

"To learn more about the Bible," said one.

"Mother made me," stated another.

Then one pointed to the preacher's son and said, *"He had to come 'cause his Daddy owns this place."*

Clifton Hawks
Blackstone, Virginia

Professor, *"When a baby swallows a coin, what should you do?"*

Premed student, *"Call the tax collector. He can get money out of anybody."*

Loren Senst
Plainview, Minnesota

Not only is a rocking chair a pretty safe means of getting back and forth, there are also no back seat drivers.

Myrtle Johnson
Jim Falls, Wisconsin

Charlie, the Greenhand

"My lunches are great since the 'Pizza Palace' began making free deliveries."

"I was in a terrible predicament yesterday morning," Jim said.

"How was that?" asked Tim.

"Well, I came home late. My father heard me and yelled out and asked what time it was. I told him it was only 12 o'clock. Just then the cuckoo clock sang out three times. I had to stand there and cuckoo nine more times."

Windler Schweer
Covington, Oklahoma

Teacher: *"What excuse do you have for not handing in your assignment?"*

Student: *"Well, I made an airplane out of it, and someone hijacked it to Cuba."*

James Lisowe
Malone, Wisconsin

Jim: *"Did you hear about the little boy who got lost in the big department store?"*

Mike: *"Nope, what happened to him?"*

Jim: *"The policeman found him and asked him why he didn't hold on to his mother's skirt. He replied, 'I couldn't reach that high'."*

Joseph Blash, Jr.
Montrose, Georgia

At a recent FFA banquet, the after-dinner speaker (who was renown for his long speeches) said, *"After such a wonderful repast as this, I believe I would be unable to speak if I ate one more bite!"*

At that instant, an unknown in the audience bellowed, *"Bring him a sandwich, quick!"*

W. D. Bradley
Stratford, Oklahoma

They say that women are smarter than men. But, did you ever see a man wearing a shirt that buttons down the back?

Danny Huebel
Ellsworth, Wisconsin

Virgil: *"Say, Bill, can you tell me why there are fewer railroad accidents than automobile accidents?"*

Bill: *"Well, it might be because the engineer isn't always hugging the firemen."*

Danny Allen
Apple Grove, West Virginia

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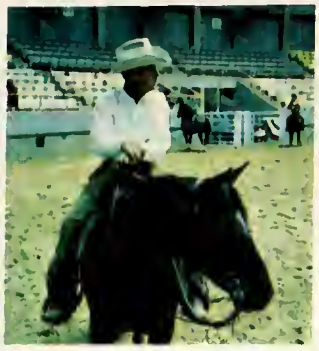

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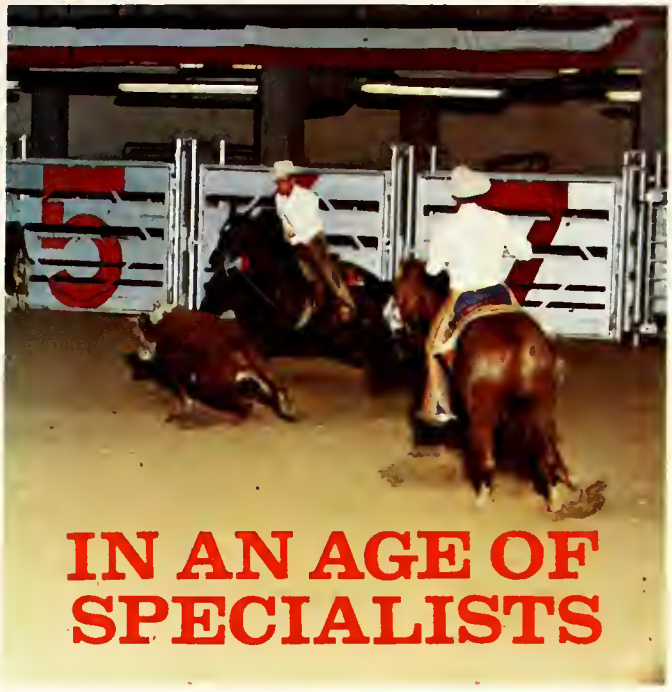

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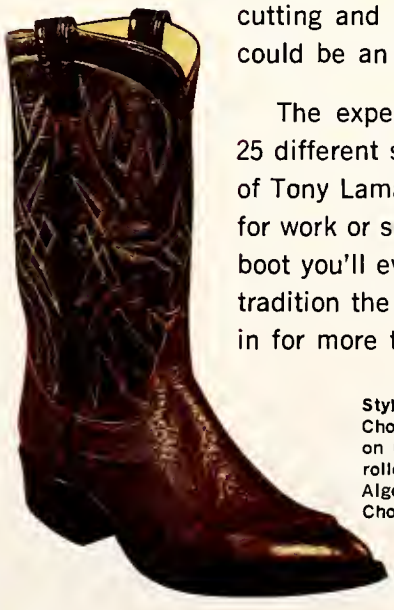

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